Amendment on 25 December 2025
Resolved by Technical Committee on 30 July 2025

Review of Guidance for the Approval of Materials and Equipment for Marine Use

Object of Amendment

Rules for the Survey and Construction of Steel Ships Parts B, C, D, GF, H, K, L, M, N, and X
Guidance for the Survey and Construction of Steel Ships Parts B, C, U, W, CS, D, GF, H, K, L, M, N, S, P, PS, R and X
Guidance for Marine Pollution Prevention Systems
Guidance for Safety Equipments
Rules for Ballast Water Management Installations
Rules / Guidance for Cargo Refrigerating Installations
Rules for Automatic and Remote Control Systems
Guidance for Preventive Machinery Maintenance Systems
Guidance for Centralized Cargo Monitoring and Control Systems
Rules / Guidance for High Speed Craft
Guidance for the Survey and Construction of Passenger Ships
Rules / Guidance for the Survey and Construction of Inland Waterway Ships
Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use

Reason for Amendment

The materials, equipment, etc. used on ships have traditionally required manufacturing process approval, type approval, approval of use, etc. in accordance with the Rules for the Survey and Construction of Steel Ships and other Rules, with specific approval procedures, in principle, being stipulated in the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use (hereinafter referred to as the "Guidance for Approval"). Based on the Guidance for Approval, approval work is conducted through the review of drawings and various documents, investigations of manufacturing facilities and testing.

However, the handling of approval is complicated because the difference between "type approval" and "approval of use", both are defined in the Guidance for Approval, is unclear and because there are many terms related to approval. Furthermore, procedures related to the approval of materials, equipment, etc. that should be stipulated in the Guidance for Approval are sometimes stipulated in other Rules.

Accordingly, relevant requirements are amended to clarify the handling of approval.

Outline of Amendment

The main details of this amendment are as follows:
(1) Revises definitions and terminology.
(2) Unifies descriptions of the expiration date of type approval certificates.

(3) Deletes descriptions of the number of copies of documents to be submitted.
(4) The "General" section is placed in Part 1, and Parts 1 to 4 have been reorganised to match the structure of other Rules.
(5) Adds type approval of materials for insulation used in liquefied gas fuel containment systems as Chapter 7 of Part 5. (Transferred from Annex 1 of Part N and Annex 1 of Part GF)
(6) Adds type approval of Planned Machinery Maintenance Scheme (PMS) or Condition Based Maintenance Scheme (CBM) management software as Chapter 1 of Part 6. (Transferred from the Annex of Part B)
(7) Deletes "standardised design for machinery and equipment" from Chapter 1 of Part 6. (Transferred to the Annex of Part B)
(8) In Chapters 1 and 2 of Part 7, changes "inspection and test specification for quality control (including test data)" at the time of application to "information on the manufacturing and quality control standards" in line with other type approvals.
(9) Adds information related to quality control standards and usage records to the documents for submission in Chapter 3 of Part 7.
(10) In Chapter 1 of Part 8, changes type tests to type approval, and adds requirements related to documents for submission and preliminary examination in line with other type approvals.

Effective Date and Application

This amendment applies to materials and equipment for marine use for which the application for approval is submitted to the Society on or after 1 July 2026.

ID:DD25-01

An asterisk (*) after the title of a requirement indicates that there is also relevant information in the corresponding Guidance.

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part B CLASS SURVEYS** **Chapter 2 CLASSIFICATION SURVEYS** **2.3 Alterations** **2.3.1 Examinations of Altered Parts***	**RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part B CLASS SURVEYS** **Chapter 2 CLASSIFICATION SURVEYS** **2.3 Alterations** **2.3.1 Examinations of Altered Parts***	

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

<table>
<tr><th>Amended</th><th>Original</th><th>Remarks</th></tr>
<tr><td colspan="2">

Table B2.10 Survey – Coating Application

<table>
<tr><th>Survey Items</th><th>Details</th></tr>
<tr><td>1 Technical data sheet*1 and statement of compliance or type approval certificate</td><td>(1) The technical data sheet and statement of compliance or type approval certificate comply with the “PERFORMANCE STANDARD FOR PROTECTIVE COATINGS FOR DEDICATED SEAWATER BALLAST TANKS IN ALL TYPE OF SHIPS AND DOUBLE-SIDE SKIN SPACES OF BULK CARRIERS” (IMO Performance Standard for Protective Coatings for Seawater Ballast Tanks, etc. / IMO resolution MEPC.215(82) as amended). The statement of compliance or type approval certificate is to be one of the following (a) to (c) items.
(a) The Society’s approval certificate specified in Chapter 4, Part 4<u>5</u> of Guidance for the Approval ~~and Type Approval~~ of Materials and Equipment for Marine Use
(b) Statement of compliance issued by the Research Institute of Marine Engineering, Japan (RIME), the Japan Paint Inspection and Testing Association or MARINTEK
(c) Other documents approved by the Society
(2) The technical data sheet and statement of compliance or type approval certificate comply with the “PERFORMANCE STANDARD FOR PROTECTIVE COATINGS FOR CARGO OIL TANKS OF CRUDE OIL TANKERS” (IMO Performance Standard for Protective Coatings for Cargo Oil Tanks / IMO resolution MEPC.288(87) as amended). The statement of compliance or type approval certificate is to be either of the following (a) or (b) items.
(a) The Society’s approval certificate specified in Chapter 4, Part 4<u>5</u> of Guidance for the Approval ~~and Type Approval~~ of Materials and Equipment for Marine Use
(b) Other documents approved by the Society</td></tr>
<tr><td>(Omitted)</td><td>(Omitted)</td></tr>
</table>

Note

*1 : “Technical data sheet” refers to the paint manufacturer product data sheets which contain detailed technical instructions and other information relevant to coatings and their application.

</td><td>Changes due to the renaming of the “Guidance for the Approval”

Changes due to the reorganization of the “Guidance for the Approval”</td></tr>
</table>

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Chapter 9 PLANNED MACHINERY SURVEYS **9.1 Planned Machinery Surveys** **9.1.3 Planned Machinery Maintenance Scheme (PMS)*** **3** PMS management software is to be approved by the Society in accordance with **Chapter 1, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**. **9.1.4 Condition Based Maintenance Scheme (CBM)*** **2** CBM management software is to be approved by the Society in accordance with **Chapter 1, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**.	**Chapter 9 PLANNED MACHINERY SURVEYS** **9.1 Planned Machinery Surveys** **9.1.3 Planned Machinery Maintenance Scheme (PMS)*** **3** PMS management software is to be approved by the Society in accordance with **Annex 9.1.3 "Procedures for approval of PMS/CBM Management Software"**. **9.1.4 Condition Based Maintenance Scheme (CBM)*** **2** CBM management software is to be approved by the Society in accordance with **Annex 9.1.3 "Procedures for approval of PMS/CBM Management Software"**.	In order to relocate "PROCEDURES FOR THE APPROVAL OF PMS/CBM MANAGEMENT SOFTWARE" to Chapter 1, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use, the current requirement is chenged.

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Annex 2.1.3 APPROVAL OF STANDARDIZED DESIGN FOR MACHINERY AND EQUIPMENT **An1.1 General** **An1.1.1 Scope** The requirements of this chapter deal with the approval of the drawings and documents which are submitted in advance to the Society as the standardized design designating the construction, dimensions, materials, specifications, etc. on machinery and equipment required to obtain approval by submitting drawings to the Society in accordance with the requirements of **2.1.3, Part B of the Rules, 2.1.2, Part 2 of the Rules for High Speed Craft, 2.1.2, Part 2 of the Rules for the Survey and Construction of Inland Waterway Ships, 2.3.1, Part 1 of the Rules for Lifting Appliances and Anchor Handling Winches** and **2.2.1 of the Rules for Cargo Refrigerating Installations**. **An1.2 Application** **An1.2.1 Application Form** The manufacturer, who intends to obtain the approval of standardized design, is to submit the appropriate application form (**Form 6-1**) filled in with necessary data and information to the Society (Head Office).	**(Newly added)**	"APPROVAL OF STANDARDIZED DESIGN FOR MACHINERY AND EQUIPMENT" in Part 6, Chapter 1 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use will be relocated to Annex of Part B. There are no changes to the approval requirements.

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
An1.2.2 Drawings and Documents In accordance with the requirements of the rules applicable to the machinery and equipment, drawings and documents, in triplicate, are to be submitted together with the application form specified in **An 1.2.1**. **An1.3 Approval** **An1.3.1 Notification of Approval** The Society, when satisfied upon examination that the drawings and documents fulfill the requirement concerned, will agree on handling these drawings and documents as the standardized design. Then one copy each of the drawings and documents will be returned to the applicant with approval stamp of the Society, approval date, approval number and term of validity indicated on them. **An1.3.2 Term of Validity** The term of validity of the approval of standardized design will be five *years* from the date of approval. **An1.3.3 Renewal of Approval** **1** The manufacturer, who intends to have a continuation of the approval of standardized design already expired or to make partial modification on the design, is to submit an application in accordance with the requirements of **An 1.2** newly. **2** In case where approval is given for a design with partial modification, expiration date will not be renewed in principle.		

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
An1.3.4 Revocation of Approval In case where either of the following **(1)** or **(2)** applies, the Society will revoke the approval of standardized design, and give a notice to the manufacturer. (1) In association with the implementation or revision of international conventions, laws and regulations, the machinery and equipment for which the standardized design were approved do not deserve the approval any longer. (2) Serious shortcomings are found in the machinery and equipment manufactured according to the approved standardized design after being installed in ships. **An1.4 Handling after Approval** **An1.4.1 Allocation of Machinery and Equipment to Ships** In case where the machinery and equipment for which the standardized design have been approved are allocated to *NK*-classed ships, the appropriate application form is to be submitted to the Society (Head Office), in triplicate, in place of the drawings and documents required by the rules.		

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Annex 2.3.1-2 PROCEDURES FOR ON BOARD NOISE MEASUREMENTS **Chapter 5 ACOUSTIC INSULATION BETWEEN ACCOMMODATION SPACES** **An5.2 Measurements of Airborne Sound Insulation Properties** **1** Materials used to comply with the requirements of **An 5.1** are to be one of the following **(1)** to **(3)**: (1) (Omitted) (2) Materials which are approved by the Society in accordance with **Chapter 6, Part 5 of the GUIDANCE FOR THE APPROVAL OF MATERIALS AND EQUIPMENT FOR MARINE USE**; or (3) (Omitted) **(Deleted)**	**Annex 2.3.1-2 PROCEDURES FOR ON BOARD NOISE MEASUREMENTS** **Chapter 5 ACOUSTIC INSULATION BETWEEN ACCOMMODATION SPACES** **An5.2 Measurements of Airborne Sound Insulation Properties** **1** Materials used to comply with the requirements of **An 5.1** are to be one of the following **(1)** to **(3)**: (1) (Omitted) (2) Materials which are approved by the Society in accordance with **Chapter 6, Part 4 of the GUIDANCE FOR THE APPROVAL AND TYPE APPROVAL OF MATERIALS AND EQUIPMENT FOR MARINE USE**; or (3) (Omitted) **Annex 9.1.3 PROCEDURES FOR THE APPROVAL OF PMS/CBM MANAGEMENT SOFTWARE** **（Annex 9.1.3 Main text omitted）**	Changes due to the renaming of the “Guidance for the Approval” Changes due to the reorganization of the “Guidance for the Approval” In order to relocate "PROCEDURES FOR THE APPROVAL OF PMS/CBM MANAGEMENT SOFTWARE" to Chapter 1, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use, the current requirement is eleted.

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part C HULL CONSTRUCTION AND EQUIPMENT** **Part 1 GENERAL HULL REQUIREMENTS** **Chapter 3 STRUCTURAL DESIGN PRINCIPLES** **3.8 Loading Manual and Loading Instruments** **3.8.3 Loading Instrument** **3.8.3.1 General** **1** (Omitted) **2** The loading instrument is to be capable of performing its intended functions in the installed environment. A loading instrument complying with **Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use** is recommended. **3** (Omitted)	**RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part C HULL CONSTRUCTION AND EQUIPMENT** **Part 1 GENERAL HULL REQUIREMENTS** **Chapter 3 STRUCTURAL DESIGN PRINCIPLES** **3.8 Loading Manual and Loading Instruments** **3.8.3 Loading Instrument** **3.8.3.1 General** **1** (Omitted) **2** The loading instrument is to be capable of performing its intended functions in the installed environment. A loading instrument complying with **Part 7 of the Guidance for the Approval a<u>nd Type Approval</u> of Materials and Equipment for Marine Use** is recommended. **3** (Omitted)	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Annex 3.2 GUIDANCE FOR THE USE OF FIBRE-REINFORCED PLASTIC (*FRP*)	**Annex 3.2 GUIDANCE FOR THE USE OF FIBRE-REINFORCED PLASTIC (*FRP*)**	
An2 Requirements for *FRP* Products	**An2 Requirements for *FRP* Products**	
An2.1 General Requirements for *FRP* Products	**An2.1 General Requirements for *FRP* Products**	
An2.1.1 General Requirements **1** All *FRP* products are to be approved by the Society in accordance with **Chapter 9, Part 3 of the Guidance for the Approval of Materials and Equipment for Marine Use** and are to be adequate for the service conditions. **2** (Omitted)	**An2.1.1 General Requirements** **1** All *FRP* products are to be approved by the Society in accordance with **Chapter 9, Part 2 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** and are to be adequate for the service conditions. **2** (Omitted)	Changes due to the renaming of the "Guidance for the Approval" Changes due to the reorganization of the "Guidance for the Approval"
An2.2 Requirements for *FRP* Products Depending on Service and/or Locations	**An2.2 Requirements for *FRP* Products Depending on Service and/or Locations**	
An2.2.1 Requirements Depending on Service and/or Locations **1** (Omitted) **2** (Omitted) **3** Where the fire integrity test and the flame spread test have been approved as the approval tests specified in **Chapter 9, Part 3 of the Guidance for the Approval of Materials and Equipment for Marine Use** in accordance with *ASTM F* 3059-14, notwithstanding **Table An1**, applicable requirements for *FRP* products can be in accordance with ***ASTM F* 3059-14**. **4** Notwithstanding the requirements in **-1** and **-3** above,	**An2.2.1 Requirements Depending on Service and/or Locations** **1** (Omitted) **2** (Omitted) **3** Where the fire integrity test and the flame spread test have been approved as the approval tests specified in **Chapter 9, Part 2 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** in accordance with *ASTM F* 3059-14, notwithstanding **Table An1**, applicable requirements for *FRP* products can be in accordance with ***ASTM F* 3059-14**. **4** Notwithstanding the requirements in **-1** and **-3** above,	Changes due to the renaming of the "Guidance for the Approval" Changes due to the reorganization of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
FRP products used for safe access to bows specified in **14.13.2** are to be tested and approved by the Society in accordance with the fire integrity test specified in **9.4.2-1(4), Chapter 9, Part 3 of the Guidance for the Approval of Materials and Equipment for Marine Use**, the surface flammability test specified in **9.4.2-3(2)**, the smoke generation test specified in **9.4.2-4(2)**, and the toxicity test specified in **9.4.2-5(1)**. **5** (Omitted) **6** (Omitted)	*FRP* products used for safe access to bows specified in **14.13.2** are to be tested and approved by the Society in accordance with the fire integrity test specified in **9.4.2-1(4), Chapter 9, Part 2 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**, the surface flammability test specified in **9.4.2-3(2)**, the smoke generation test specified in **9.4.2-4(2)**, and the toxicity test specified in **9.4.2-5(1)**. **5** (Omitted) **6** (Omitted)	

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks

Table An1 Applicable Requirements for *FRP* Products

Location	Service	Fire Integrity	Fire Retardance	Flame Spread and Surface Flammability	Smoke Generation	Toxicity
Cargo Pump Rooms	All personnel walkways, catwalks, ladders, platforms, or access areas	L_1	○	○	—	—
Cargo Holds	Walkways or areas that may be used for escape, or access for firefighting, emergency operation, or rescue	V_1	○	—	—	—
	Walkways, catwalks, ladders, platforms, or access areas other than those described above	—	○	—	—	—
Cargo Tanks	All personnel walkways, catwalks, ladders, platforms, or access areas	*See* **Note (3)**	○	—	—	—
Fuel Oil Tanks	All personnel walkways, catwalks, ladders, platforms, or access areas	*See* **Note (3)**	○	—	—	—
Ballast Water Tanks	All personnel walkways, catwalks, ladders, platforms, or access areas	*See* **Note (4)**	○	—	—	—
Cofferdams, void spaces, double bottoms, pipe tunnels, etc.	All personnel walkways, catwalks, ladders, platforms, or access areas	*See* **Note (4)**	○	—	—	—
Accommodation, service spaces and control rooms	All personnel walkways, catwalks, ladders, platforms, or access areas	L_1	○	○	○	—
Lifeboat embarkation or safe refuge stations in open deck areas	All personnel walkways, catwalks, ladders, platforms, or access areas	L_2	○	—	—	—
Open decks or semi-enclosed areas	Walkways or areas which may be used for escape or access for firefighting, emergency operation, or rescue(6)	L_3(5)	○	—	—	—
	Walkways, catwalks, ladders, platforms, or access areas other than those described above	—	○	—	—	—

(Notes)

(1) Symbols

○: The fire retardance test, flame spread and surface flammability test, smoke generation test and toxicity test specified

Changes due to the renaming of the "Guidance for the Approval"

Changes due to the reorganization of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
in **9.4.2, Chapter 9, Part ~~2~~3 of the Guidance for the Approval ~~and Type Approval~~ of Materials and Equipment for Marine Use** are to be satisfied. –: Not applicable (2) Abbreviations L_1: L_1 is the abbreviation for Fire Integrity Level 1. *FRP* products complying with Fire Integrity Level 1 are those specified in **9.1.2(4), Chapter 9, Part ~~2~~3 of the Guidance for the Approval ~~and Type Approval~~ of Materials and Equipment for Marine Use**. L_2: L_2 is the abbreviation for Fire Integrity Level 2. *FRP* products complying with Fire Integrity Level 2 are those specified in **9.1.2(3), Chapter 9, Part ~~2~~3 of the Guidance for the Approval ~~and Type Approval~~ of Materials and Equipment for Marine Use**. L_3: L_3 is the abbreviation for Fire Integrity Level 3. *FRP* products complying with Fire Integrity Level 3 are those specified in **9.1.2(2), Chapter 9, Part ~~2~~3 of the Guidance for the Approval ~~and Type Approval~~ of Materials and Equipment for Marine Use**". (3) Fire integrity is not required in principle. However, if these spaces are normally entered and exited when underway, *FRP* of L_1 is to be applied. (4) Fire integrity is not required in principle. However, if these spaces are normally entered and exited when underway, *FRP* of L_3 is to be applied. (5) Vessels fitted with fixed foam fire-extinguishing systems and fixed dry chemical powder type extinguishing systems on deck require *FRP* of L_1 integrity for foam system operational areas and access routes. (6) Excluding the safe access to the bow specified in **14.13.2**.		

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Chapter 14 EQUIPMENT **14.5 Equipment Numbers and Emergency Towing Arrangements** **14.5.2 Emergency Towing Arrangements** **14.5.2.4 Soundness of Emergency Towing Arrangement** The emergency towing arrangement is to comply with the following **(1)** or **(2)**. (1) Where a prototype of the emergency towing arrangement is arranged in the same manner as it is to be installed on board the ship, the prototype test is to be carried out in accordance with the requirements specified in **Chapter 6, Part 3 of Guidance for the Approval of Materials and Equipment for Marine Use** and a production test of individual components is to be carried out in accordance with the same requirements. (2) (Omitted)	**Chapter 14 EQUIPMENT** **14.5 Equipment Numbers and Emergency Towing Arrangements** **14.5.2 Emergency Towing Arrangements** **14.5.2.4 Soundness of Emergency Towing Arrangement** The emergency towing arrangement is to comply with the following **(1)** or **(2)**. (1) Where a prototype of the emergency towing arrangement is arranged in the same manner as it is to be installed on board the ship, the prototype test is to be carried out in accordance with the requirements specified in **Chapter 6, Part 2 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** and a production test of individual components is to be carried out in accordance with the same requirements. (2) (Omitted)	Changes due to the renaming of the "Guidance for the Approval" Changes due to the reorganization of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part D MACHINERY INSTALLATIONS** **Chapter 2 RECIPROCATING INTERNAL COMBUSTION ENGINES** **2.1 General** **2.1.1 General*** **3** For each type of reciprocating internal combustion engines, type approval is to be obtained by the engine designer (hereinafter referred to "licensor" in this Chapter) as specified separately by the Society. **2.1.3 Drawings and Data*** **2** The drawings and data for the inspection and testing specified in **-1** (the items represented by the mark ○ in **Table D2.1(a)** and **Table D2.1(b)**, hereinafter indicated the same way throughout this Chapter) are to be submitted in accordance with **2.1.4-1** by the engine manufacturer producing engines with the drawings and data whose type approval has been obtained in accordance with **2.1.1-3** (hereinafter referred to as "licensee" in this Chapter). Such drawings and data, however, may be submitted by the licensor in accordance with **2.1.4-2**.	**RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part D MACHINERY INSTALLATIONS** **Chapter 2 RECIPROCATING INTERNAL COMBUSTION ENGINES** **2.1 General** **2.1.1 General*** **3** For each type of reciprocating internal combustion engines, an approval of use is to be obtained by the engine designer (hereinafter referred to "licensor" in this Chapter) as specified separately by the Society. **2.1.3 Drawings and Data*** **2** The drawings and data for the inspection and testing specified in **-1** (the items represented by the mark ○ in **Table D2.1(a)** and **Table D2.1(b)**, hereinafter indicated the same way throughout this Chapter) are to be submitted in accordance with **2.1.4-1** by the engine manufacturer producing engines with the drawings and data whose approval of use has been obtained in accordance with **2.1.1-3** (hereinafter referred to as "licensee" in this Chapter). Such drawings and data, however, may be submitted by the licensor in accordance with **2.1.4-2**.	Terminology alignment Terminology alignment

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks

Table D2.1(a) Drawings and Data for Approval

	Items	For inspection and testing
	(Omitted)	
	(b) Category *B* turbochargers i) Sectional assembly (including principal dimensions and materials of housing components for containment evaluation.) ii) Documentation of containment in the event of the disc fracture specified in **2.5.1-6** iii) Documentation of following operational data and limitations ・Maximum permissible operating speed (*rpm*) ・Maximum permissible exhaust gas temperature at the turbine inlet ・Minimum lubrication oil inlet pressure ・Maximum permissible vibration levels (self- and externally generated vibrations) ・Alarm level for exhaust gas temperature at the turbine inlet (levels are also to be indicated on engine control system diagrams) ・Lubrication oil inlet pressure low alarm set point (levels are also to be indicated on engine control system diagrams) ・Lubrication oil outlet temperature high alarm set point (levels are also to be indicated on engine control system diagrams) iv) Diagram of lubrication oil systems (diagrams included in piping arrangements fitted to engines may be accepted instead) v) Test report of type approval test (only for type approval tests) vi) Test procedure (only for type approval tests) (Omitted)	
(Omitted)		

Terminology alignment

Table D2.1(b) Drawings and Data for Reference

	Items	For inspection and testing
(Omitted)		
(31)	Certification of ~~an approval of use~~ a type approval for environmental tests, control components(2)	○
(Omitted)		

Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
2.1.4 Approval of Reciprocating Internal Combustion Engines **1** Reciprocating internal combustion engines are to be approved in accordance with the following **(1)** to **(6)**: (1) Development of documents and data for engine production (a) (Omitted) (b) Each type of reciprocating internal combustion engine is to be provided with a certificate of type approval obtained by the licensor in accordance with **2.1.1-3**. For the first engine of a type or for those with no service records, the process of an approval of use and the approval process for production by the licensee may be performed simultaneously. (c) The licensor is to review the drawings and data of the reciprocating internal combustion engine whose type approval has been obtained for the application and develop, if necessary, application specific drawings and data for production of reciprocating internal combustion engines for the use of the licensee in developing the reciprocating internal combustion engine specific production drawings and data for the inspection and testing specified in **2.1.3-1**. (d) If substantive modifications to the drawings and data of the reciprocating internal combustion engine whose type approval has been obtained have been made in the drawings and data of reciprocating internal combustion engines to be	**2.1.4 Approval of Reciprocating Internal Combustion Engines** **1** Reciprocating internal combustion engines are to be approved in accordance with the following **(1)** to **(6)**: (1) Development of documents and data for engine production (a) (Omitted) (b) Each type of reciprocating internal combustion engine is to be provided with a certificate of approval of use obtained by the licensor in accordance with **2.1.1-3**. For the first engine of a type or for those with no service records, the process of an approval of use and the approval process for production by the licensee may be performed simultaneously. (c) The licensor is to review the drawings and data of the reciprocating internal combustion engine whose approval of use has been obtained for the application and develop, if necessary, application specific drawings and data for production of reciprocating internal combustion engines for the use of the licensee in developing the reciprocating internal combustion engine specific production drawings and data for the inspection and testing specified in **2.1.3-1**. (d) If substantive modifications to the drawings and data of the reciprocating internal combustion engine whose approval of use has been obtained have been made in the drawings and data of reciprocating internal combustion engines to be	Terminology alignment Terminology alignment Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
produced, the affected drawings and data are to be resubmitted to the Society as specified separately by the Society.	produced, the affected drawings and data are to be resubmitted to the Society as specified separately by the Society.	
(2) Drawings and data for the inspection and testing of reciprocating internal combustion engines	(2) Drawings and data for the inspection and testing of reciprocating internal combustion engines	
(a) The licensee is to develop the drawings and data for the inspection and testing specified in **2.1.3-1** and a comparison list of these drawings and data to the drawings and data of the reciprocating internal combustion engine whose type approval has been obtained by the licensor and submit these drawings and the comparison list to the Society.	(a) The licensee is to develop the drawings and data for the inspection and testing specified in **2.1.3-1** and a comparison list of these drawings and data to the drawings and data of the reciprocating internal combustion engine whose approval of use has been obtained by the licensor and submit these drawings and the comparison list to the Society.	Terminology alignment
(b) As for the drawings and data for the inspection and testing specified in **2.1.3-1**, if there are differences in the technical content on the licensee's production drawings and data of the reciprocating internal combustion engine compared to the drawings and data of the reciprocating internal combustion engine whose type approval has been obtained by the licensor, the licensee is to submit "Confirmation of the licensor's acceptance of licensee's modifications" approved by the licensor and signed by the licensee and licensor. If the licensor acceptance is not confirmed, the reciprocating internal combustion engine manufactured by the licensee is to be regarded as a different engine type and is **2.1.1-3** is to apply to the reciprocating internal combustion engine.	(b) As for the drawings and data for the inspection and testing specified in **2.1.3-1**, if there are differences in the technical content on the licensee's production drawings and data of the reciprocating internal combustion engine compared to the drawings and data of the reciprocating internal combustion engine whose approval of use has been obtained by the licensor, the licensee is to submit "Confirmation of the licensor's acceptance of licensee's modifications" approved by the licensor and signed by the licensee and licensor. If the licensor acceptance is not confirmed, the reciprocating internal combustion engine manufactured by the licensee is to be regarded as a different engine type and is **2.1.1-3** is to apply to the reciprocating internal combustion engine.	Terminology alignment
((c) to (e) are omitted.)	((c) to (e) are omitted.)	

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
((3) to (6) are omitted.) **3** Components of licensor's design which are covered by the certificate of type approval of the relevant engine type are regarded as approved whether manufactured by the reciprocating internal combustion engine manufacturer or sub-supplied. **2.6 Tests** **2.6.1 Shop Tests*** **2** For reciprocating internal combustion engines, the purpose of the shop trials is to verify design premises such as engine power, safety against fire, adherence to approved limits such as maximum pressure, and functionality as well as to establish reference values or base lines for later reference in the operational phase. The programme is to be in accordance with the following: ((1) to (5) are omitted.) (6) The following **(a)** to **(c)** are to be inspected. However, a part of or all of these inspections may be postponed until shipboard testing when agreed to by the Society. (a) (Omitted) (b) (Omitted) (c) Temperature of hot surface insulation Random temperature readings are to be compared with corresponding readings obtained during the type approval test. This is to be done while running at the rated power of engine. If the insulation is modified subsequently to the type approval test, the Society	((3) to (6) are omitted.) **3** Components of licensor's design which are covered by the certificate of approval of use of the relevant engine type are regarded as approved whether manufactured by the reciprocating internal combustion engine manufacturer or sub-supplied. **2.6 Tests** **2.6.1 Shop Tests*** **2** For reciprocating internal combustion engines, the purpose of the shop trials is to verify design premises such as engine power, safety against fire, adherence to approved limits such as maximum pressure, and functionality as well as to establish reference values or base lines for later reference in the operational phase. The programme is to be in accordance with the following: ((1) to (5) are omitted.) (6) The following **(a)** to **(c)** are to be inspected. However, a part of or all of these inspections may be postponed until shipboard testing when agreed to by the Society. (a) (Omitted) (b) (Omitted) (c) Temperature of hot surface insulation Random temperature readings are to be compared with corresponding readings obtained during the type test. This is to be done while running at the rated power of engine. If the insulation is modified subsequently to the type test, the Society may request	Terminology alignment Terminology alignment

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Amended	Original	Remarks
may request temperature measurements as required by the type approval test. In the case of reciprocating internal combustion engine with an application for approval of use dated before 1 July 2016 which is an engine type that does not have the results of temperature measurements required by the type approval test, temperature measurements are to be performed by a procedure deemed appropriate by the Society. ((7) and (8) are omitted.)	temperature measurements as required by the type test. In the case of reciprocating internal combustion engine with an application for approval of use dated before 1 July 2016 which is an engine type that does not have the results of temperature measurements required by the type test, temperature measurements are to be performed by a procedure deemed appropriate by the Society. ((7) and (8) are omitted.)	

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Table D2.7 Programme for Shop Trials of Engines (Table is omitted.) Notes: (1) After testing has been completed, the fuel delivery system is to be blocked so as to limit the engines to run at not more than 100 % power, unless intermittent overload power is approved by the Society. In the case of propulsion engines also driving power take-off generators, the fuel delivery system is to be adjusted so that overload of generator (110 % power) can be given in service and the electrical protection of downstream system components is activated before the engine stalls. (2) After testing has been completed, the fuel delivery system is to be adjusted such that overload (110 % power) can be given in service after installation on board so that the governing characteristics (including the activation of generator protective devices) can be fulfilled at all times. (3) For dual fuel engines, tests in the gas mode are not required in accordance with **2.6.1-3(2)**. (4) Submission of test reports for identical engines and turbocharger configurations proving their compatibility for over-loaded operation may be accepted as substitutions for the 110 % power run. (5) In the case of propulsion engines also driving power take-off generators, tests are to be carried out at n_0 for 15 *minutes* after having reached a steady operating condition. (6) The sequence is to be selected by the engine manufacturer. (7) A shorter time may be considered by the Society provided that the time specified in **2.6.1-2(3)** is allowed. (8) Only for variable speed engines. (9) The test item applies only to direct reversible engines. (10) Only for engines for which intermittent overload is approved, and tests are to be for the duration agreed upon with the manufacturer. (11) The scope of the open-up inspection is to be as deemed appropriate by the surveyor. The omission of the open-up inspection may be considered by the Society provided that all of the following **(a)** through **(g)** are met: (a) It is not the open-up inspection to be carried out during the type approval test specified in **Chapter 8, Part 6 of the Guidance for the Approval ~~and Type Approval~~ of Materials and Equipment for Marine Use**. (b) No abnormality is found in the temperature measurement for each bearing of the main bearings and the crank pin bearings after the load test, and in the visual inspection of the inner surfaces of the cylinder liners from the inspection ports of the crankcase. (In the case of a 2-stroke engine, the cylinder liners, pistons, piston rings and		Changes due to the renaming of the "Guidance for the Approval" Terminology alignment

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
piston rods are to be inspected from the scavenging space.) (c) No abnormality is found in the visual inspection of the lubrication oil after the load test (including the visual inspection of the filter in cases where the open-up of the strainer is reasonable). (d) Flushing of the parts through which the lubrication oil passes is carried out during the manufacturing process. (e) The manufacturer of the reciprocating internal combustion engine is approved by the Society in accordance with the **Rules for Approval of Manufacturers and Service Suppliers**. (f) There is agreement between the involved parties. (manufacturer, shipyard, prospective owner, etc.) (g) Other items deemed necessary by the Society.		
Chapter 12 PIPES, VALVES, PIPE FITTINGS AND AUXILIARIES	**Chapter 12 PIPES, VALVES, PIPE FITTINGS AND AUXILIARIES**	

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Table D12.8 Application Classifications of Mechanical Joints(1) (Table is omitted.) Notes: (1) +: Application is allowed; -: Application is not allowed (2) Fire endurance test in accordance with **9.3.2(6), Part 6 of Guidance for the Approval ~~and Type Approval~~ of Materials and Equipment for Marine Use**. (3) If mechanical joints include any components which readily deteriorate in case of fire, the following **(4)** to **(7)** apply. (4) Fire endurance test is to be applied when mechanical joints are installed in pump rooms and open decks. (5) Slip-on joints are not accepted inside machinery spaces of category *A* or accommodation spaces. May be accepted in machinery spaces other than those of category *A* provided that the joints are located in easily visible and accessible positions (refer to *MSC/Circ*.734). (6) Fire resistant types approved by the Society except in cases where such mechanical joints are installed on open decks as defined in **9.2.3-2(10), Part R of the Rules**; this excludes spaces in the cargo areas of tankers, ships carrying liquefied gases in bulk and ships carrying dangerous chemicals in bulk (as defined in **3.2.6, Part R**, **1.1.4(6), Part N** and **1.3.1(4), Part S**), but not used for fuel oil lines, fire extinguishing systems and fire mains. (7) Fire endurance test is to be applied when mechanical joints are installed inside machinery spaces of category *A* (8) Only above the freeboard deck. (9) Slip type slip-on joints as shown in **Fig. D12.1** may be used for pipes on deck with a design pressure of 1.0 *MPa* or less. (10) Piping where mechanical joints are used is also to comply with the requirements specified in **13.2.4-4**. (11) Piping where slip joints are used is also to comply with the requirements specified in **13.2.4-6**. (12) If a connection has passed the “30 min dry” test, it is considered suitable also for applications for which the “8 min dry + 22 min wet” and/or “30 min wet” tests are required. If a connection has passed the “8 min dry+22 min wet” test, it is considered suitable also for applications for which the “30 min wet” test is required.		Changes due to the renaming of the “Guidance for the Approval”

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Amended	Original	Remarks
Chapter 18 AUTOMATIC AND REMOTE CONTROL	**Chapter 18 AUTOMATIC AND REMOTE CONTROL**	
18.7 Tests	**18.7 Tests**	
		Terminology alignment
18.7.2 Type Approval	**18.7.2 Approval of Use**	
1 In cases where automatic devices and automatic equipment have passed the environmental tests specified in **18.7.1**, they will receive type approval from the Society; and, upon request from the manufacturer, the Society will make this information public.	**1** In cases where automatic devices and automatic equipment have passed the environmental tests specified in **18.7.1**, they will receive approval of use from the Society; and, upon request from the manufacturer, the Society will make this information public.	Terminology alignment
2 With respect to all automatic devices and automatic equipment which have already received type approval from the Society, a part or all of the environmental test specified in **18.7.1(1)** may be omitted.	**2** With respect to all automatic devices and automatic equipment which have already received approval of use from the Society, a part or all of the environmental test specified in **18.7.1(1)** may be omitted.	Terminology alignment

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Amended	Original	Remarks
RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part GF SHIPS USING LOW-FLASHPOINT FUELS** **Annex 1.1.3-3 GAS-FUELLED ENGINES** **Chapter 2 CONSTRUCTION AND EQUIPMENT OF GAS-FUELLED ENGINES** **2.2 Construction and Strength** **2.2.3 Crankcase** **1** Crankcase explosion relief valves are to be installed in accordance with **2.4.3, Part D of the Rules**. Refer also to **10.3.1-2, Part GF of the Rules**. For engines not covered by **2.4.3, Part D of the Rules**, the detailed evaluation required by **8.3, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use** is to determine if crankcase explosion relief valves are necessary.	**RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part GF SHIPS USING LOW-FLASHPOINT FUELS** **Annex 1.1.3-3 GAS-FUELLED ENGINES** **Chapter 2 CONSTRUCTION AND EQUIPMENT OF GAS-FUELLED ENGINES** **2.2 Construction and Strength** **2.2.3 Crankcase** **1** Crankcase explosion relief valves are to be installed in accordance with **2.4.3, Part D of the Rules**. Refer also to **10.3.1-2, Part GF of the Rules**. For engines not covered by **2.4.3, Part D of the Rules**, the detailed evaluation required by **8.3, Part 6 of the Guidance for the Approval <u>and Type Approval</u> of Materials and Equipment for Marine Use** is to determine if crankcase explosion relief valves are necessary.	Changes due to the renaming of the "Guidance for the Approval"

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Amended	Original	Remarks
2.4 Accessory Equipment	**2.4 Accessory Equipment**	
2.4.1 Charge Air Systems and Exhaust Gas Systems **6** Explosion relief devices for air inlet and exhaust manifold are to be type approved according to **Chapter 13, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**2.4.1 Charge Air Systems and Exhaust Gas Systems** **6** Explosion relief devices for air inlet and exhaust manifold are to be approved according to **Chapter 13, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval" Terminology alignment
8 The arrangement of the explosion relief devices is to be determined in the risk analysis required by **8.3, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use** and reflected in the safety concept.	**8** The arrangement of the explosion relief devices is to be determined in the risk analysis required by **8.3, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** and reflected in the safety concept.	Changes due to the renaming of the "Guidance for the Approval"
2.4.2 Gas Pipes **5** For piping attached to gas-fuelled engines, the following **(1)** to **(8)** also apply. (1) (Omitted) (2) Other connections as mentioned in **7.3.6-4(4), Part GF of the Rules** may be accepted subject to type approval in accordance with the requirements of **Chapter 9, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**. ((3) to (8) are omitted.)	**2.4.2 Gas Pipes** **5** For piping attached to gas-fuelled engines, the following **(1)** to **(8)** also apply. (1) (Omitted) (2) Other connections as mentioned in **7.3.6-4(4), Part GF of the Rules** may be accepted subject to approval of use in accordance with the requirements of **Chapter 9, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. ((3) to (8) are omitted.)	Changes due to the renaming of the "Guidance for the Approval" Terminology alignment

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
Chapter 4 TESTS **4.1 Type Approval** For each type of gas-fuelled engine, type approval is to be obtained by the engine designer (licensor) in accordance with requirements specified in **Chapter 8, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**Chapter 4 TESTS** **4.1 Approval of Use** For each type of gas-fuelled engine, approval of use is to be obtained by the engine designer (licensor) in accordance with requirements specified in **Chapter 8, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Terminology alignment Changes due to the renaming of the "Guidance for the Approval" Terminology alignment

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Amended	Original	Remarks
RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part H ELECTRICAL INSTALLATIONS** **Annex 2.11.1-2 Accumulator Battery Systems** **1.1 General** **1.1.3 Submission of Drawings and Documents** **2** The drawings for approval and documents for reference to be submitted to the Society for the designs of accumulator battery systems and their components (e.g. cells and modules) are as follows. However, other drawings and documents may be required when deemed necessary by the Society. (1) (Omitted) (2) Documents for reference (a) Test reports for cells or modules (not required for cells or modules of types used in accumulator battery systems which have already received type approval) (b) Test reports for accumulator battery systems (not required for accumulator battery systems of a type which has received type approval) (c) (Omitted)	**RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part H ELECTRICAL INSTALLATIONS** **Annex 2.11.1-2 Accumulator Battery Systems** **1.1 General** **1.1.3 Submission of Drawings and Documents** **2** The drawings for approval and documents for reference to be submitted to the Society for the designs of accumulator battery systems and their components (e.g. cells and modules) are as follows. However, other drawings and documents may be required when deemed necessary by the Society. (1) (Omitted) (2) Documents for reference (a) Test reports for cells or modules (not required for cells or modules of types used in accumulator battery systems which have already received approval of use) (b) Test reports for accumulator battery systems (not required for accumulator battery systems of a type which has received approval of use) (c) (Omitted)	Terminology alignment

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
1.3 Additional Requirements for Electrical Propulsion, Main Electrical Power Source or Emergency Electrical Power Source Purposes	**1.3 Additional Requirements for Electrical Propulsion, Main Electrical Power Source or Emergency Electrical Power Source Purposes**	
1.3.7 Shop Tests **1** The electrical equipment specified below is to be tested in accordance with **18.7.1, Part D** at manufacturing plants or other locations. However, with respect to equipment which has been already received type approval from the Society, some or all of the environmental tests specified in **18.7.1(1), Part D** may be omitted. ((1) and (2) are omitted.)	**1.3.7 Shop Tests** **1** The electrical equipment specified below is to be tested in accordance with **18.7.1, Part D** at manufacturing plants or other locations. However, with respect to equipment which has been already received approval of use from the Society, some or all of the environmental tests specified in **18.7.1(1), Part D** may be omitted. ((1) and (2) are omitted.)	Terminology alignment
1.4 Accumulator Battery Systems	**1.4 Accumulator Battery Systems**	
1.4.3 Shop Tests **1** Cells and modules of accumulator battery systems are to be tested as specified in **Table 1** at manufacturing plants or other locations. However, all the tests may be omitted for cells and modules of types used in accumulator battery systems that have already received type approval from the Society in accordance with **Chapter 9, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**1.4.3 Shop Tests** **1** Cells and modules of accumulator battery systems are to be tested as specified in **Table 1** at manufacturing plants or other locations. However, all the tests may be omitted for cells and modules of types used in accumulator battery systems that have already received approval of use from the Society in accordance with **Chapter 9, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
2 Control and protection functions of *BMS* for accumulator battery systems are to be tested as specified in **Table 2** at manufacturing plants or other locations. However, all the tests may be omitted for accumulator battery systems that have already received type approval from the Society in accordance with **Chapter 9, Part 7 of the Guidance for the**	**2** Control and protection functions of *BMS* for accumulator battery systems are to be tested as specified in **Table 2** at manufacturing plants or other locations. However, all the tests may be omitted for accumulator battery systems that have already received approval of use from the Society in accordance with **Chapter 9, Part 7 of the Guidance for the**	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
Approval of Materials and Equipment for Marine Use. **4** Accumulator battery systems are to be tested as specified in **18.7.1, Part D** at manufacturing plants. It is acceptable for environmental tests to use only those elements (e.g. battery packs) of accumulator battery systems installed on board ships that have the minimum functions required for verification of tests. However, some of all of the environmental tests specified in **18.7.1(1), Part D** may be omitted for accumulator battery systems which have already received type approval from the Society.	**Approval and Type Approval of Materials and Equipment for Marine Use**. **4** Accumulator battery systems are to be tested as specified in **18.7.1, Part D** at manufacturing plants. It is acceptable for environmental tests to use only those elements (e.g. battery packs) of accumulator battery systems installed on board ships that have the minimum functions required for verification of tests. However, some of all of the environmental tests specified in **18.7.1(1), Part D** may be omitted for accumulator battery systems which have already received approval of use from the Society.	Terminology alignment

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Amended	Original	Remarks
RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part K MATERIALS** **Chapter 1 GENERAL** **1.2 Manufacture and Approval of Materials** **1.2.2 Approval of Manufacturing Process** **1** Approval of manufacturing process specified in **1.2.1** is to be in accordance with the requirements of "**Guidance for the Approval of Materials and Equipment for Marine Use**". **Chapter 4 STEEL PIPES** **4.1 Steel Tubes for Boilers and Heat Exchangers** **4.1.1 Application*** **2** Pipes which comply with standard deemed equivalent by the Society may be treated as pipes that comply with this section. Such pipes are, in principle, to satisfy the following conditions.	**RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part K MATERIALS** **Chapter 1 GENERAL** **1.2 Manufacture and Approval of Materials** **1.2.2 Approval of Manufacturing Process** **1** Approval of manufacturing process specified in **1.2.1** is to be in accordance with the requirements of "**Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**". **Chapter 4 STEEL PIPES** **4.1 Steel Tubes for Boilers and Heat Exchangers** **4.1.1 Application*** **2** Pipes which comply with standard deemed equivalent by the Society may be treated as pipes that comply with this section. Such pipes are, in principle, to satisfy the following conditions.	Changes due to the renaming of the "Guidance for the Approval" Changes due to the renaming of the "Guidance for the Approval"

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Amended	Original	Remarks
(1) Their manufacturers are subjected to manufacturing process approval in accordance with the **Guidance for the Approval of Materials and Equipment for Marine Use**. (2) (Omitted)	(1) Their manufacturers are subjected to manufacturing process approval in accordance with the **Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. (2) (Omitted)	
4.2 Steel Pipes for Pressure Piping	**4.2 Steel Pipes for Pressure Piping**	
4.2.1 Application*	**4.2.1 Application***	
2 Pipes which comply with standard deemed equivalent by the Society may be treated as pipes that comply with this section. Such pipes are, in principle, to satisfy the following conditions. (1) Their manufacturers are subjected to manufacturing process approval in accordance with the **Guidance for the Approval of Materials and Equipment for Marine Use**. (2) (Omitted)	**2** Pipes which comply with standard deemed equivalent by the Society may be treated as pipes that comply with this section. Such pipes are, in principle, to satisfy the following conditions. (1) Their manufacturers are subjected to manufacturing process approval in accordance with the **Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. (2) (Omitted)	Changes due to the renaming of the "Guidance for the Approval"
4.3 Stainless Steel Pipes	**4.3 Stainless Steel Pipes**	
4.3.1 Application*	**4.3.1 Application***	
2 Pipes which comply with standard deemed equivalent by the Society may be treated as pipes that comply with this section. Such pipes are, in principle, to satisfy the following conditions. (1) Their manufacturers are subjected to manufacturing process approval in accordance with the **Guidance**	**2** Pipes which comply with standard deemed equivalent by the Society may be treated as pipes that comply with this section. Such pipes are, in principle, to satisfy the following conditions. (1) Their manufacturers are subjected to manufacturing process approval in accordance with the **Guidance**	Changes due to the renaming of the "Guidance for the Approval"

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Amended	Original	Remarks
for the Approval of Materials and Equipment for Marine Use. (2) (Omitted) **4.5 Steel Pipes for Low Temperature Service** **4.5.1 Application*** **2** Pipes which comply with standard deemed equivalent by the Society may be treated as pipes that comply with this section. Such pipes are, in principle, to satisfy the following conditions. (1) Their manufacturers are subjected to manufacturing process approval in accordance with the **Guidance for the Approval of Materials and Equipment for Marine Use**. (2) (Omitted) **Chapter 8 ALUMINIUM ALLOYS** **8.2 Aluminium Alloy Pipes** **8.2.1 Application*** **3** Aluminium alloy seamless pipes which comply with standard deemed equivalent by the Society may be treated as pipes that comply with this section. Such pipes are, in principle, to satisfy the following conditions. (1) Their manufacturers are subjected to manufacturing	**for the Approval and Type Approval of Materials and Equipment for Marine Use**. (2) (Omitted) **4.5 Steel Pipes for Low Temperature Service** **4.5.1 Application*** **2** Pipes which comply with standard deemed equivalent by the Society may be treated as pipes that comply with this section. Such pipes are, in principle, to satisfy the following conditions. (1) Their manufacturers are subjected to manufacturing process approval in accordance with the **Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. (2) (Omitted) **Chapter 8 ALUMINIUM ALLOYS** **8.2 Aluminium Alloy Pipes** **8.2.1 Application*** **3** Aluminium alloy seamless pipes which comply with standard deemed equivalent by the Society may be treated as pipes that comply with this section. Such pipes are, in principle, to satisfy the following conditions. (1) Their manufacturers are subjected to manufacturing	Changes due to the renaming of the "Guidance for the Approval" Changes due to the renaming of the "Guidance for the Approval" Terminology alignment

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Amended	Original	Remarks
process approval in accordance with the **Guidance for the Approval of Materials and Equipment for Marine Use**.	process approval in accordance with the **Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	
(2) (Omitted)	(2) (Omitted)	

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part L EQUIPMENT** **Chapter 2 ANCHORS** **2.2 Anchors Used for Positioning Systems** **2.2.4 Processes of Manufacture and Constructions** **2** For anchors intended for use on vessels or floating offshore facilities fixed or positioned at specific sea areas for long periods of time, detailed data relating to performance, etc. are to be submitted for Society approval in accordance with **Chapter 1A, Part 3 of the Guidance for the Approval of Materials and Equipment for Marine Use**. **2.2.10 Visual Inspections and Non-destructive Tests*** **1** Anchors are to be subjected to and pass visual inspections and the non-destructive tests specified in **(1)** to **(4)** below. Such inspections and tests are, however, to be carried out after proof tests are completed. ((1) to (3**)** are omitted.) (4) For anchors complying with the requirements in **Chapter 1A, Part 3 of the Guidance for the Approval of Materials and Equipment for Marine**	**RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part L EQUIPMENT** **Chapter 2 ANCHORS** **2.2 Anchors Used for Positioning Systems** **2.2.4 Processes of Manufacture and Constructions** **2** For anchors intended for use on vessels or floating offshore facilities fixed or positioned at specific sea areas for long periods of time, detailed data relating to performance, etc. are to be submitted for Society approval in accordance with **Chapter 1A, Part 2 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. **2.2.10 Visual Inspections and Non-destructive Tests*** **1** Anchors are to be subjected to and pass visual inspections and the non-destructive tests specified in **(1)** to **(4)** below. Such inspections and tests are, however, to be carried out after proof tests are completed. ((1) to (3**)** are omitted.) (4) For anchors complying with the requirements in **Chapter 1A, Part 2 of the Guidance for the Approval and Type Approval of Materials and**	Changes due to the renaming of the "Guidance for the Approval" Changes due to the reorganization of the "Guidance for the Approval" Changes due to the renaming of the "Guidance for the Approval" Changes due to the reorganization of the "Guidance for the Approval"

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Amended	Original	Remarks
Use or **2.2.9-4** above, ultrasonic testing is to be carried out for all full penetration welding in addition to the tests specified in **(3)** above. **Chapter 3 CHAINS** **3.2 Offshore Mooring Chains and Others** **3.2.5 Processes of Manufacture*** **3** In cases where the studs for Grade *R*3 offshore chains and Grade *R*3*S* offshore chains are welded, the following **(1)** to **(7)** are to be complied with: ((1) to (6) are omitted.) (7) Welding is to be carried out according to an approved procedure, by a welder qualified by the Society, with type approved low hydrogen electrodes.	**Equipment for Marine Use** or **2.2.9-4** above, ultrasonic testing is to be carried out for all full penetration welding in addition to the tests specified in **(3)** above. **Chapter 3 CHAINS** **3.2 Offshore Mooring Chains and Others** **3.2.5 Processes of Manufacture*** **3** In cases where the studs for Grade *R*3 offshore chains and Grade *R*3*S* offshore chains are welded, the following **(1)** to **(7)** are to be complied with: ((1) to (6) are omitted.) (7) Welding is to be carried out according to an approved procedure, by a welder qualified by the Society, with approved low hydrogen electrodes.	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part M WELDING** **Chapter 2 WELDING WORKS** **2.4 Welding Process** **2.4.1 Selection of Welding Consumables*** **2** With respect to materials type approved by the Society for use in welding consumables, materials other than type approved materials may be used for backing. However, for the backing in welding consumables specified in **6.5**, other type approved welding consumables are to be used. **Chapter 5 WELDERS AND WELDERS QUALIFICATION TESTS** **5.3 Qualification Tests** **5.3.2 Testing Materials and Welding Consumables*** **1** Base metals and welding consumables for test assemblies are to conform to one of the following	**RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part M WELDING** **Chapter 2 WELDING WORKS** **2.4 Welding Process** **2.4.1 Selection of Welding Consumables*** **2** With respect to materials approved by the Society for use in welding consumables, materials other than approved materials may be used for backing. However, for the backing in welding consumables specified in **6.5**, other approved welding consumables are to be used. **Chapter 5 WELDERS AND WELDERS QUALIFICATION TESTS** **5.3 Qualification Tests** **5.3.2 Testing Materials and Welding Consumables*** **1** Base metals and welding consumables for test assemblies are to conform to one of the following	Terminology alignment Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
requirements or to be of equivalent quality approved by the Society: ((1) and (2) are omitted.) (3) Welding consumables Welding consumables type approved by the Society	requirements or to be of equivalent quality approved by the Society: ((1) and (2) are omitted.) (3) Welding consumables Welding consumables approved by the Society	
Chapter 6 WELDING CONSUMABLES	**Chapter 6 WELDING CONSUMABLES**	
6.1 General	**6.1 General**	
6.1.3 Type Approval*	**6.1.3 Approval***	Terminology alignment
1 Welding consumables are to have type approval at each manufacturing plant and for each brand.	**1** Welding consumables are to have approval at each manufacturing plant and for each brand.	Terminology alignment
6.1.5 Annual Inspections	**6.1.5 Annual Inspections**	
1 Welding consumables which have been type approved according to the preceding **6.1.3** are to undergo annual inspection specified in **6.2** through **6.9** and are to satisfactorily pass the inspection. Furthermore, annual inspections of welding consumables which have been type approved in accordance with codes different from those specified in this Chapter are to be undertaken in accordance with test codes approved by the Society.	**1** Welding consumables which have been approved according to the preceding **6.1.3** are to undergo annual inspection specified in **6.2** through **6.9** and are to satisfactorily pass the inspection. Furthermore, annual inspections of welding consumables which have been approved in accordance with codes different from those specified in this Chapter are to be undertaken in accordance with test codes approved by the Society.	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
6.2 Electrodes for Manual Arc Welding for Mild and High Tensile Steels and Steels for Low Temperature Service	**6.2 Electrodes for Manual Arc Welding for Mild and High Tensile Steels and Steels for Low Temperature Service**	
6.2.4 General Provisions for Tests*	**6.2.4 General Provisions for Tests***	
4 Where both electrodes given in **6.2.1(1)** and **(2)** are requested type approval tests specified for each electrode are to be conducted. However, deposited metal tests may be omitted for electrodes given in **6.2.1(2)**.	**4** Where both electrodes given in **6.2.1(1)** and **(2)** are requested approval tests specified for each electrode are to be conducted. However, deposited metal tests may be omitted for electrodes given in **6.2.1(2)**.	Terminology alignment
6.2.15 Annual Inspections	**6.2.15 Annual Inspections**	
1 In the annual inspections, test specified in the following **-2** and **-3** are to conduct for each brand of the type approved electrodes and they are to be passed satisfactorily.	**1** In the annual inspections, test specified in the following **-2** and **-3** are to conduct for each brand of the approved electrodes and they are to be passed satisfactorily.	Terminology alignment
6.2.16 Changes in Grades	**6.2.16 Changes in Grades**	
1 Where changes in grades relating to the strength or toughness of type approved electrodes are to be made, the tests specified in **-2** or **-3** are to be carried out according to the requirements in **6.1.3-6**, and the electrodes must pass the tests satisfactorily.	**1** Where changes in grades relating to the strength or toughness of approved electrodes are to be made, the tests specified in **-2** or **-3** are to be carried out according to the requirements in **6.1.3-6**, and the electrodes must pass the tests satisfactorily.	Terminology alignment
6.3 Automatic Welding Consumables for Mild Steels, High Tensile Steels and Steels for Low Temperature Service	**6.3 Automatic Welding Consumables for Mild Steels, High Tensile Steels and Steels for Low Temperature Service**	
6.3.15 Annual Inspections	**6.3.15 Annual Inspections**	
1 In the annual inspection, test specified in the following **-2** are to be conducted for each type approved brand, and the	**1** In the annual inspection, test specified in the following **-2** are to be conducted for each approved brand, and the	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
consumables are to meet the corresponding requirements.	consumables are to meet the corresponding requirements.	
6.3.16 Changes in Grades **1** Where changes in grades relating to the strength or toughness of type approved automatic welding consumables are to be made, the tests specified in **-2**, **-3** or **-4**, as applicable, are to be carried out according to the requirements in **6.1.3-6**, and the electrodes must pass the tests satisfactorily.	**6.3.16 Changes in Grades** **1** Where changes in grades relating to the strength or toughness of approved automatic welding consumables are to be made, the tests specified in **-2**, **-3** or **-4**, as applicable, are to be carried out according to the requirements in **6.1.3-6**, and the electrodes must pass the tests satisfactorily.	Terminology alignment
6.4 Semi-automatic Welding Consumables for Mild Steels, High Tensile Steels and Steels for Low Temperature Service	**6.4 Semi-automatic Welding Consumables for Mild Steels, High Tensile Steels and Steels for Low Temperature Service**	
6.4.15 Annual Inspections **1** In the annual inspections, tests specified in the following **-2** are to be conducted for each type approved brand and they are to be passed satisfactorily.	**6.4.15 Annual Inspections** **1** In the annual inspections, tests specified in the following **-2** are to be conducted for each approved brand and they are to be passed satisfactorily.	Terminology alignment
6.4.16 Changes in Grades **1** Where changes in grades relating to the strength or toughness of type approved semi-automatic welding consumables are to be made, the tests specified in **-2**, or **-3** are to be carried out according to the requirements in **6.1.3-6**, and the semi-automatic welding consumables must pass the tests satisfactorily.	**6.4.16 Changes in Grades** **1** Where changes in grades relating to the strength or toughness of approved semi-automatic welding consumables are to be made, the tests specified in **-2**, or **-3** are to be carried out according to the requirements in **6.1.3-6**, and the semi-automatic welding consumables must pass the tests satisfactorily.	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
6.5 Electro-slag and Electro-gas Welding Consumables	**6.5 Electro-slag and Electro-gas Welding Consumables**	
6.5.10 Annual Inspections **1** In the annual inspections, the type approved welding consumables are to be subjected to the tests provided in **-2**.	**6.5.10 Annual Inspections** **1** In the annual inspections, the approved welding consumables are to be subjected to the tests provided in **-2**.	Terminology alignment
6.5.11 Changes in Grades Where changes in grades relating to the strength or toughness of type approved welding consumables are to be made, the tests specified in **6.5.4-1** are to be carried out according to the requirements in **6.1.3-6**, and the welding consumables must pass the tests satisfactorily.	**6.5.11 Changes in Grades** Where changes in grades relating to the strength or toughness of approved welding consumables are to be made, the tests specified in **6.5.4-1** are to be carried out according to the requirements in **6.1.3-6**, and the welding consumables must pass the tests satisfactorily.	Terminology alignment
6.6 One Side Automatic Welding Consumables for Mild Steels, High Tensile Steels and Steels for Low Temperature Service	**6.6 One Side Automatic Welding Consumables for Mild Steels, High Tensile Steels and Steels for Low Temperature Service**	
6.6.11 Annual Inspections **1** In the annual inspection, tests specified in the following **-2** and **-3** are to be conducted for each type approved brand, and the consumables are to meet the corresponding requirements.	**6.6.11 Annual Inspections** **1** In the annual inspection, tests specified in the following **-2** and **-3** are to be conducted for each approved brand, and the consumables are to meet the corresponding requirements.	Terminology alignment
6.6.12 Changes in Grades Where changes in grades relating to the strength or toughness of type approved one side automatic welding consumables are to be made, all the tests specified in **6.6.4-1** are to be carried out according to the requirements in **6.1.3-6**, and one side automatic welding consumables must pass the	**6.6.12 Changes in Grades** Where changes in grades relating to the strength or toughness of approved one side automatic welding consumables are to be made, all the tests specified in **6.6.4-1** are to be carried out according to the requirements in **6.1.3-6**, and one side automatic welding consumables must pass the	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
tests satisfactorily.	tests satisfactorily.	
6.7 Welding Consumables for Stainless Steel	**6.7 Welding Consumables for Stainless Steel**	
6.7.10 Annual Inspections **1** In the annual inspections, tests specified in the following **-2**, and **-3**, are conducted for each type approved brand, and the welding consumables are to be passed these tests satisfactorily.	**6.7.10 Annual Inspections** **1** In the annual inspections, tests specified in the following **-2**, and **-3**, are conducted for each approved brand, and the welding consumables are to be passed these tests satisfactorily.	Terminology alignment
6.8 Welding Consumables for Aluminium Alloys	**6.8 Welding Consumables for Aluminium Alloys**	
6.8.10 Annual Inspections **1** In the annual inspections, every type approved welding consumable is to be subjected to the tests provided in **-2** and are to be successfully examined.	**6.8.10 Annual Inspections** **1** In the annual inspections, every approved welding consumable is to be subjected to the tests provided in **-2** and are to be successfully examined.	Terminology alignment
6.9 Welding Consumables for High Strength Rolled Steels for Offshore Structures	**6.9 Welding Consumables for High Strength Rolled Steels for Offshore Structures**	
6.9.16 Change in Grades The changes in grades relating to the strength or toughness of type approved welding consumables are to comply with the requirements specified in **6.2.16**, **6.3.16** or **6.4.16** according to the grade of the welding consumables.	**6.9.16 Change in Grades** The changes in grades relating to the strength or toughness of approved welding consumables are to comply with the requirements specified in **6.2.16**, **6.3.16** or **6.4.16** according to the grade of the welding consumables.	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part N SHIPS CARRYING LIQUEFIED GASES IN BULK** **Annex 16.1.1-3 GAS-FUELLED ENGINES** **Chapter 2 CONSTRUCTION AND EQUIPMENT OF GAS-FUELLED ENGINES** **2.2 Construction and Strength** **2.2.3 Crankcase** **1** Crankcase explosion relief valves are to be installed in accordance with **2.4.3, Part D of the Rules**. Refer also to **10.3.1-2, Part GF of the Rules**. For engines not covered by **2.4.3, Part D of the Rules**, the detailed evaluation required by **8.3, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use** is to determine if crankcase explosion relief valves are necessary.	**RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part N SHIPS CARRYING LIQUEFIED GASES IN BULK** **Annex 16.1.1-3 GAS-FUELLED ENGINES** **Chapter 2 CONSTRUCTION AND EQUIPMENT OF GAS-FUELLED ENGINES** **2.2 Construction and Strength** **2.2.3 Crankcase** **1** Crankcase explosion relief valves are to be installed in accordance with **2.4.3, Part D of the Rules**. Refer also to **10.3.1-2, Part GF of the Rules**. For engines not covered by **2.4.3, Part D of the Rules**, the detailed evaluation required by **8.3, Part 6 of the Guidance for the Approval <u>and Type Approval</u> of Materials and Equipment for Marine Use** is to determine if crankcase explosion relief valves are necessary.	Changes due to the renaming of the “Guidance for the Approval”

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
2.4 Accessory Equipment	**2.4 Accessory Equipment**	
2.4.1 Charge Air Systems and Exhaust Gas Systems	**2.4.1 Charge Air Systems and Exhaust Gas Systems**	
6 Explosion relief devices for air inlet and exhaust manifold are to be type approved according to **Chapter 13, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**6** Explosion relief devices for air inlet and exhaust manifold are to be approved according to **Chapter 13, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval" Terminology alignment
8 The arrangement of the explosion relief devices is to be determined in the risk analysis required by **8.3, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use** and reflected in the safety concept.	**8** The arrangement of the explosion relief devices is to be determined in the risk analysis required by **8.3, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** and reflected in the safety concept.	Changes due to the renaming of the "Guidance for the Approval"
2.4.2 Gas Pipes	**2.4.2 Gas Pipes**	
4 For piping attached to gas-fuelled engines, the following **(1)** to **(8)** also apply. (1) (Omitted) (2) Other connections as mentioned in **7.3.6-4(4), Part GF of the Rules** may be accepted subject to type approval in accordance with the requirements of **Chapter 9, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**. ((3) to (8) are omitted.)	**4** For piping attached to gas-fuelled engines, the following **(1)** to **(8)** also apply. (1) (Omitted) (2) Other connections as mentioned in **7.3.6-4(4), Part GF of the Rules** may be accepted subject to approval of use in accordance with the requirements of **Chapter 9, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. ((3) to (8) are omitted.)	Terminology alignment Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Chapter 5 TESTS **5.1 Type Approval** For each type of gas-fuelled engine, type approval is to be obtained by the engine designer (licensor) in accordance with requirements specified in **Chapter 8, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**Chapter 5 TESTS** **5.1 Approval of Use** For each type of gas-fuelled engine, approval of use is to be obtained by the engine designer (licensor) in accordance with requirements specified in **Chapter 8, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Terminology alignment Changes due to the renaming of the "Guidance for the Approval" Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part X COMPUTER-BASED SYSTEMS** **Chapter 2 PLANS, DOCUMENTS AND TESTS** **2.1 Submission of Plans and Documents** **2.1.1 Submission of Plans and Documents** The following drawings and data are, in principle, to be submitted. (1) Plans and documents for approval: (a) Plans and documents for computer-based systems subject to **Chapter 3** that are required to be submitted for approval purposes are specified in **2.2.1** according to system category. Summaries of said plans and documents are shown in **Tables X2.1** and **X2.2**. However, for computer-based systems type approved in accordance with **Chapter 8, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use**, plans and documents submitted for the type approval may be reutilized. (b) Plans and documents for computer-based systems subject to **Chapter 4** that are required to	**RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part X COMPUTER-BASED SYSTEMS** **Chapter 2 PLANS, DOCUMENTS AND TESTS** **2.1 Submission of Plans and Documents** **2.1.1 Submission of Plans and Documents** The following drawings and data are, in principle, to be submitted. (1) Plans and documents for approval: (a) Plans and documents for computer-based systems subject to **Chapter 3** that are required to be submitted for approval purposes are specified in **2.2.1** according to system category. Summaries of said plans and documents are shown in **Tables X2.1** and **X2.2**. However, for computer-based systems approved for use in accordance with **Chapter 8, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**, plans and documents submitted for the approval of use may be reutilized. (b) Plans and documents for computer-based systems subject to **Chapter 4** that are required to	Changes due to the renaming of the "Guidance for the Approval" Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
be submitted for approval purposes are specified in **4.4.1(1), (2), (3), (4)** and **(6)**. Summaries of said plans and documents are shown in **Table X2.3**. However, for computer-based systems type approved in accordance with **Chapter 10, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use**, where appropriate "Test Reports" specified in **4.4.1(10)** are submitted, plans and documents submitted for the type approval may be reutilized except for "Computer-based Systems Asset Inventory" specified in **4.4.1(1)** and "Topology Diagram" specified in **4.4.1(2)**.	be submitted for approval purposes are specified in **4.4.1(1), (2), (3), (4)** and **(6)**. Summaries of said plans and documents are shown in **Table X2.3**. However, for computer-based systems approved for use in accordance with **Chapter 10, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**, where appropriate "Test Reports" specified in **4.4.1(10)** are submitted, plans and documents submitted for the approval of use may be reutilized except for "Computer-based Systems Asset Inventory" specified in **4.4.1(1)** and "Topology Diagram" specified in **4.4.1(2)**.	Changes due to the renaming of the "Guidance for the Approval" Terminology alignment Terminology alignment
(c) (Omitted) (d) (Omitted)	(c) (Omitted) (d) (Omitted)	
(2) Plans and documents for reference:	(2) Plans and documents for reference:	
(a) Plans and documents for computer-based systems subject to **Chapter 3** that are required to be submitted for reference purposes are specified in **2.2.1** according to system category. Summaries of said plans and documents are shown in **Tables X2.1** and **X2.2**. However, for computer-based systems type approved in accordance with **Chapter 8, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use,** plans and documents submitted for the type approval may be reutilized except for the "list of system categorisations" specified in **2.2.1-3(3)**.	(a) Plans and documents for computer-based systems subject to **Chapter 3** that are required to be submitted for reference purposes are specified in **2.2.1** according to system category. Summaries of said plans and documents are shown in **Tables X2.1** and **X2.2**. However, for computer-based systems approved for use in accordance with **Chapter 8, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use,** plans and documents submitted for the approval of use may be reutilized except for the "list of system categorisations" specified in **2.2.1-3(3)**.	Changes due to the renaming of the "Guidance for the Approval" Terminology alignment
(b) Plans and documents for computer-based	(b) Plans and documents for computer-based	Changes due to the

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(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
systems subject to **Chapter 4** that are required to be submitted for reference purposes are specified in **4.4.1(5), (7), (8)** and **(9)**. Summaries of said plans and documents are shown in **Table X2.3**. However, for computer-based systems type approved in accordance with **Chapter 10, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use**, where appropriate "Test Reports" specified in **4.4.1(10)** are submitted, plans and documents submitted for the type approval may be reutilized. (c) Other plans and documents considered necessary by the Society	systems subject to **Chapter 4** that are required to be submitted for reference purposes are specified in **4.4.1(5), (7), (8)** and **(9)**. Summaries of said plans and documents are shown in **Table X2.3**. However, for computer-based systems approved for use in accordance with **Chapter 10, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**, where appropriate "Test Reports" specified in **4.4.1(10)** are submitted, plans and documents submitted for the approval of use may be reutilized. (c) Other plans and documents considered necessary by the Society	renaming of the "Guidance for the Approval" Terminology alignment

Table X2.3 Supplier's Plans and Documents to be Submitted
(Related to Chapter 4 CYBER RESILIENCE OF ON-BOARD SYSTEMS AND EQUIPMENT)

#	Document (Referenced requirements)	Requirements (Referenced requirements)	Reference	Approval
(Omitted)				

Changes due to the renaming of the "Guidance for the Approval" Terminology alignment

(Notes)
Approval: Plans and documents to be submitted for approval
Reference: Plans and documents to be submitted for reference
○: Submission required
(1): Submitted when type approval ~~of use~~ has not been obtained in accordance with **Chapter 10, Part 7 of the Guidance for the Approval ~~and Type Approval~~ of Materials and Equipment for Marine Use**
(2): Submitted when type approval ~~of use~~ has been obtained in accordance with **Chapter 10, Part 7 of the Guidance for the Approval ~~and Type Approval~~ of Materials and Equipment for Marine Use**

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
2.2 Tests **2.2.1 Tests (Related to Chapter 3 COMPUTER BASED SYSTEMS)** **2** Verification Items for System Suppliers ((1) to (3) are omitted.) (4) Environmental compliance of hardware components (see **3.4.2-4**) (a) Category I: Environmental tests may be omitted. However, type approval certificates issued in accordance with **Chapter 1, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use** or documents proving the passing of the environmental tests specified in **18.7.1(1), Part D** are to be submitted for reference when deemed necessary by Society (see **3.3.2**). (b) Categories II and III: Type approval certificates issued in accordance with **Chapter 1, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use** or documents proving the passing of the environmental tests specified in **18.7.1(1), Part D** are to be submitted for reference. ((5) to (8) are omitted.)	**2.2 Tests** **2.2.1 Tests (Related to Chapter 3 COMPUTER BASED SYSTEMS)** **2** Verification Items for System Suppliers ((1) to (3) are omitted.) (4) Environmental compliance of hardware components (see **3.4.2-4**) (a) Category I: Environmental tests may be omitted. However, certificates issued in accordance with **Chapter 1, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** or documents proving the passing of the environmental tests specified in **18.7.1(1), Part D** are to be submitted for reference when deemed necessary by Society (see **3.3.2**). (b) Categories II and III: Certificates issued in accordance with **Chapter 1, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** or documents proving the passing of the environmental tests specified in **18.7.1(1), Part D** are to be submitted for reference. ((5) to (8) are omitted.)	Changes due to the renaming of the "Guidance for the Approval" Terminology alignment Changes due to the renaming of the "Guidance for the Approval" Terminology alignment

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
Chapter 3 COMPUTER-BASED SYSTEMS	**Chapter 3 COMPUTER-BASED SYSTEMS**	
3.1 General	**3.1 General**	
3.1.3 Structure **1** General certification requirements for computer-based systems and their relationship to type approval are described in **3.2**.	**3.1.3 Structure** **1** General certification requirements for computer-based systems and their relationship to approval of use are described in **3.2**.	Terminology alignment
3.2 Approval of Systems and Components	**3.2 Approval of Systems and Components**	
3.2.2 Type approval for Computer-based Systems **1** Computer-based systems that are routinely manufactured and include standardised software functions may be type approved in accordance with **Chapter 8, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use**. Hardware is to be documented according to **2.2.1-2(4).** The type approval consists of two main verification activities: (1) assessment of type-specific documentation, and (2) survey and testing of the standardised functions.	**3.2.2 Approval of Use for Computer-based Systems** **1** Computer-based systems that are routinely manufactured and include standardised software functions may be approved in accordance with **Chapter 8, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. Hardware is to be documented according to **2.2.1-2(4).** The approval of use consists of two main verification activities: (1) assessment of type-specific documentation, and (2) survey and testing of the standardised functions.	Terminology alignment Changes due to the renaming of the "Guidance for the Approval" Terminology alignment
2 In principle, vessel-specific system certification is required as specified in **3.2.1** even if the type approval is acquired for computer-based systems. However, for such computer systems, submitted drawings may be omitted subject to **2.1.1(1)(a)** and **(2)(a)**, and tests may be subject to **3.2.1-2**.	**2** In principle, vessel-specific system certification is required as specified in **3.2.1** even if the approval of use is acquired for computer-based systems. However, for such computer systems, submitted drawings may be omitted subject to **2.1.1(1)(a)** and **(2)(a)**, and tests may be subject to **3.2.1-2**.	Terminology alignment

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
3.4 Requirements for Development and Certification of Computer-based Systems	**3.4 Requirements for Development and Certification of Computer-based Systems**	
3.4.2 Requirements for System Suppliers*	**3.4.2 Requirements for System Suppliers***	
7 Factory acceptance test (FAT) before installation on board	**7** Factory acceptance test (FAT) before installation on board	Changes due to the renaming of the "Guidance for the Approval" Terminology alignment
(1) FAT is to be carried out for each product or when the computer-based system acquires type approval in accordance with **Chapter 8, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use**. The main purpose of FAT is to demonstrate to the Society that the system is complete and compliant with applicable requirements, thus enabling issuance of a vessel-specific certificate for the system.	(1) FAT is to be carried out for each product or when the computer-based system acquires approval of use in accordance with **Chapter 8, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. The main purpose of FAT is to demonstrate to the Society that the system is complete and compliant with applicable requirements, thus enabling issuance of a vessel-specific certificate for the system.	
((2) to (5) are omitted.)	((2) to (5) are omitted.)	
Chapter 4 CYBER RESILIENCE OF ON-BOARD SYSTEMS AND EQUIPMENT	**Chapter 4 CYBER RESILIENCE OF ON-BOARD SYSTEMS AND EQUIPMENT**	
4.4 Requirements for Cyber resilience of on-board systems and equipment	**4.4 Requirements for Cyber resilience of on-board systems and equipment**	
4.4.1 Documentation for Cyber resilience of on-board systems and equipment	**4.4.1 Documentation for Cyber resilience of on-board systems and equipment**	
The following documents are to be submitted to the Society for review and approval in accordance with the requirements in this Chapter (see also **4.6.2**).	The following documents are to be submitted to the Society for review and approval in accordance with the requirements in this Chapter (see also **4.6.2**).	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
((1) to (9) are omitted.) (10) Test reports Computer-based systems with type approval certificate covering the security capabilities of this Chapter may be exempted from survey by the Society. However, test reports signed by the supplier are to be submitted to the Society, demonstrating that the supplier has completed design, construction, testing, configuration, and hardening as would otherwise be verified by the Society in survey (**4.6.3** and **2.2.3**).	((1) to (9) are omitted.) (10) Test reports Computer-based systems with approval certificate covering the security capabilities of this Chapter may be exempted from survey by the Society. However, test reports signed by the supplier are to be submitted to the Society, demonstrating that the supplier has completed design, construction, testing, configuration, and hardening as would otherwise be verified by the Society in survey (**4.6.3** and **2.2.3**).	
4.6 Demonstration of Compliance	**4.6 Demonstration of Compliance**	
4.6.1 Introduction **3** Type approval based on **Chapter 10, Part 7 of Guidance for the Approval of Materials and Equipment for Marine Use** is voluntary and applies for computer-based systems that are standard and routinely manufactured. See **3.2.1** and **3.2.2**for definition of System certification and type approval.	**4.6.1 Introduction** **3** Approval of use based on **Chapter 10, Part 7 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** is voluntary and applies for computer-based systems that are standard and routinely manufactured. See **3.2.1** and **3.2.2**for definition of System certification and approval of use.	Changes due to the renaming of the "Guidance for the Approval" Terminology alignment
4.6.2 Plan Approval **2** If the computer-based system holds a valid type approval certificate covering the requirements of this Chapter, subject to approval by the Society, the supplier may submit a reduced set of vessel-specific documents to the Society (see **Table X2.3**).	**4.6.2 Plan Approval** **2** If the computer-based system holds a valid approval certificate covering the requirements of this Chapter, subject to approval by the Society, the supplier may submit a reduced set of vessel-specific documents to the Society (see **Table X2.3**).	Terminology alignment
4.6.3 Survey and Factory Acceptance Test **1** Survey and factory acceptance test is a vessel-specific	**4.6.3 Survey and Factory Acceptance Test** **1** Survey and factory acceptance test is a vessel-specific	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
verification activity required for computer-based systems that do not hold a valid type approval certificate covering the requirements of this Chapter.	verification activity required for computer-based systems that do not hold a valid approval certificate covering the requirements of this Chapter.	

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
RULES FOR BALLAST WATER MANAGEMENT INSTALLATIONS **Part 1 GENERAL** **Chapter 2 TERMINOLOGY AND ABBREVIATIONS** **2.1 General** **2.1.1 Terminology (*Article* 1 of *BWM Convention* and *Regulation* A-1 of *Annex*)** For the purpose of the Rules, the following definitions apply unless otherwise stated in each Part: ((1) to (20) are omitted.) (21) "System Design Limitations of a *BWMS* (hereinafter referred to as "*SDL*")" means the limitatons specified in **11.1.2(16), Part 3 of the Guidance for the Approval of Materials and Equipment for Marine Use**. ((22) and (23) are omitted.)	**RULES FOR BALLAST WATER MANAGEMENT INSTALLATIONS** **Part 1 GENERAL** **Chapter 2 TERMINOLOGY AND ABBREVIATIONS** **2.1 General** **2.1.1 Terminology (*Article* 1 of *BWM Convention* and *Regulation* A-1 of *Annex*)** For the purpose of the Rules, the following definitions apply unless otherwise stated in each Part: ((1) to (20) are omitted.) (21) "System Design Limitations of a *BWMS* (hereinafter referred to as "*SDL*")" means the limitatons specified in **11.1.2(16), Part 2 of the Guidance for the Approval <u>and Type Approval</u> of Materials and Equipment for Marine Use**. ((22) and (23) are omitted.)	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
RULES FOR CARGO REFRIGERATING INSTALLATIONS **Chapter 2 SURVEYS** **2.1 General** **2.1.2 Registration Surveys and Intervals of Registration Maintenance Surveys*** **1** Registration Surveys (1) Registration Surveys during Construction Refrigerating installations intended to be constructed and registered with the Society under the survey by the Surveyors in accordance with the designs approved by the Society are to undergo the Registration Survey during Construction. The presence of the Surveyor is required at the following stages of the work. However, except the case of thermal balance test specified in **6.2.6** of the Rules, the requirements may be modified having regard to the actual status of facilities, technical abilities and quality control at the works. (a) When the tests of materials in accordance with the requirements in **Part K of the Rules for the Survey and Construction of Steel Ships** and other tests necessary for the approval described in **3.1.3-4**, **5.2.1-1** and **5.2.5** of the Rules are	**RULES FOR CARGO REFRIGERATING INSTALLATIONS** **Chapter 2 SURVEYS** **2.1 General** **2.1.2 Registration Surveys and Intervals of Registration Maintenance Surveys*** **1** Registration Surveys (1) Registration Surveys during Construction Refrigerating installations intended to be constructed and registered with the Society under the survey by the Surveyors in accordance with the designs approved by the Society are to undergo the Registration Survey during Construction. The presence of the Surveyor is required at the following stages of the work. However, except the case of thermal balance test specified in **6.2.6** of the Rules, the requirements may be modified having regard to the actual status of facilities, technical abilities and quality control at the works. (a) When the tests of materials in accordance with the requirements in **Part K of the Rules for the Survey and Construction of Steel Ships** and other tests necessary for the approval or acceptance described in **3.1.3-4**, **5.2.1-1** and **5.2.5**	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
carried out. ((b) to (d) are omitted.) (2) (Omitted)	of the Rules are carried out. ((b) to (d) are omitted.) (2) (Omitted)	
Chapter 3 REFRIGERATING MACHINERY	**Chapter 3 REFRIGERATING MACHINERY**	
3.1 General	**3.1 General**	
3.1.3 Materials and Welding* **6** Special materials such as rubber hoses, plastic tubes (including vinyl pipes), aluminium alloys, etc. used for refrigerating machinery is to be approved by the Society in consideration of the refrigerant used or service conditions.	**3.1.3 Materials and Welding*** **6** Special materials such as rubber hoses, plastic tubes (including vinyl pipes), aluminium alloys, etc. used for refrigerating machinery is to be approved or accepted by the Society in consideration of the refrigerant used or service conditions.	Terminology alignment
Chapter 5 REFRIGERATED CHAMBERS	**Chapter 5 REFRIGERATED CHAMBERS**	
5.2 Insulation and Insulation Materials	**5.2 Insulation and Insulation Materials**	
5.2.1 Insulation Materials **1** Insulation materials approved by the Society are to be used.	**5.2.1 Insulation Materials** **1** Insulation materials approved or accepted by the Society are to be used.	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
RULES FOR AUTOMATIC AND REMOTE CONTROL SYSTEMS **Chapter 2 SURVEYS OF AUTOMATIC AND REMOTE CONTROL SYSTEMS** **2.2 Registration Surveys** **2.2.3 <u>Type Approval</u>** <u>Type approval</u> for those devices and equipment which have passed those environmental tests specified in **2.2.2** above is to be in accordance with those requirements specified in **18.7.2, Part D of the Rules for the Survey and Construction of Steel Ships**.	**RULES FOR AUTOMATIC AND REMOTE CONTROL SYSTEMS** **Chapter 2 SURVEYS OF AUTOMATIC AND REMOTE CONTROL SYSTEMS** **2.2 Registration Surveys** **2.2.3 <u>Approval of Use</u>** <u>Approval of use</u> for those devices and equipment which have passed those environmental tests specified in **2.2.2** above is to be in accordance with those requirements specified in **18.7.2, Part D of the Rules for the Survey and Construction of Steel Ships**.	Terminology alignment Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
RULES FOR HIGH SPEED CRAFT **Part 9 MACHINERY INSTALLATIONS** **Chapter 2 RECIPROCATING INTERNAL COMBUSTION ENGINES** **2.1 General** **2.1.1 General*** **2** For each type of reciprocating internal combustion engines, a type approval is to be obtained by the engine designer (hereinafter referred to "licensor" in this Chapter) as specified separately by the Society. **2.1.3 Drawings and Data*** **2** The drawings and data for the purpose of inspection and testing specified in **-1** (the items represented by the mark ○ in **Table 9.2.1(a)** and **Table 9.2.1(b)**, hereinafter indicated in the same way throughout this Chapter) are to be submitted in accordance with **2.1.4-1** by the engine manufacturer producing engines with the drawings and data whose type approval has been obtained in accordance with **2.1.1-2** (hereinafter referred to as "licensee" in this Chapter). Such drawings and data, however, may be submitted by the licensor in accordance with **2.1.4-2**.	**RULES FOR HIGH SPEED CRAFT** **Part 9 MACHINERY INSTALLATIONS** **Chapter 2 RECIPROCATING INTERNAL COMBUSTION ENGINES** **2.1 General** **2.1.1 General*** **2** For each type of reciprocating internal combustion engines, an approval of use is to be obtained by the engine designer (hereinafter referred to "licensor" in this Chapter) as specified separately by the Society. **2.1.3 Drawings and Data*** **2** The drawings and data for the purpose of inspection and testing specified in **-1** (the items represented by the mark ○ in **Table 9.2.1(a)** and **Table 9.2.1(b)**, hereinafter indicated in the same way throughout this Chapter) are to be submitted in accordance with **2.1.4-1** by the engine manufacturer producing engines with the drawings and data whose approval of use has been obtained in accordance with **2.1.1-2** (hereinafter referred to as "licensee" in this Chapter). Such drawings and data, however, may be submitted by the licensor in accordance with **2.1.4-2**.	Terminology alignment Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks

Table 9.2.1(a) Drawings and Data for Approval

	Items	For inspection and testing
	(Omitted)	
	(b) Category *B* turbochargers i) Sectional assembly (including principal dimensions and materials of housing components for containment evaluation.) ii) Documentation of containment in the event of the disc fracture iii) Documentation of following operational data and limitations ・Maximum permissible operating speed (*rpm*) ・Maximum permissible exhaust gas temperature at the turbine inlet ・Minimum lubrication oil inlet pressure ・Maximum permissible vibration levels (self- and externally generated vibrations) ・Alarm level for exhaust gas temperature at the turbine inlet (levels are also to be indicated on engine control system diagrams) ・Lubrication oil inlet pressure low alarm set point (levels are also to be indicated on engine control system diagrams) ・Lubrication oil outlet temperature high alarm set point (levels are also to be indicated on engine control system diagrams) iv) Diagram of lubrication oil systems (diagrams included in piping arrangements fitted to engines may be accepted instead) v) Test report of type approval test (only for type approval tests) vi) Test procedure (only for type approval tests)	—
	(Omitted)	

Note: (Omitted)

Terminology alignment

Table 9.2.1(b) Drawings and Data for Reference

	Items	For inspection and testing
	(Omitted)	
(31)	Certification of ~~an approval of use~~ a type approval for environmental tests, control components(2)	○
	(Omitted)	

Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
2.1.4 Approval of Reciprocating Internal Combustion Engines*	**2.1.4 Approval of Reciprocating Internal Combustion Engines***	
1 Reciprocating internal combustion engines are to be approved in accordance with the following **(1)** to **(6)**:	**1** Reciprocating internal combustion engines are to be approved in accordance with the following **(1)** to **(6)**:	
(1) Development of documents and data for engine production	(1) Development of documents and data for engine production	
(a) (Omitted)	(a) (Omitted)	
(b) Each type of reciprocating internal combustion engine is to be provided with a certificate of type approval obtained by the licensor in accordance with **2.1.1-2**. For the first engine of a type or for those with no service records, the process of an approval of use and the approval process for production by the licensee may be performed simultaneously.	(b) Each type of reciprocating internal combustion engine is to be provided with a certificate of approval of use obtained by the licensor in accordance with **2.1.1-2**. For the first engine of a type or for those with no service records, the process of an approval of use and the approval process for production by the licensee may be performed simultaneously.	Terminology alignment
(c) The licensor is to review the drawings and data of the reciprocating internal combustion engine whose type approval has been obtained for the application and develop, if necessary, application specific drawings and data for production of reciprocating internal combustion engines for the use of the licensee in developing the reciprocating internal combustion engine specific production drawings and data for the purpose of inspection and testing specified in **2.1.3-1**.	(c) The licensor is to review the drawings and data of the reciprocating internal combustion engine whose approval of use has been obtained for the application and develop, if necessary, application specific drawings and data for production of reciprocating internal combustion engines for the use of the licensee in developing the reciprocating internal combustion engine specific production drawings and data for the purpose of inspection and testing specified in **2.1.3-1**.	Terminology alignment Terminology alignment
(d) If substantive modifications to the drawings and data of the reciprocating internal combustion engine whose type approval has been obtained have been made in the drawings and data of	(d) If substantive modifications to the drawings and data of the reciprocating internal combustion engine whose approval of use has been obtained have been made in the drawings and data of	

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
reciprocating internal combustion engines to be produced, the affected drawings and data are to be resubmitted to the Society as specified separately by the Society. (2) Drawings and data for the inspection and testing of reciprocating internal combustion engines (a) The licensee is to develop the drawings and data for the inspection and testing specified in **2.1.3-1** and a comparison list of these drawings and data to the drawings and data of the reciprocating internal combustion engine whose type approval has been obtained by the licensor and submit these drawings and the comparison list to the Society. (b) As for the drawings and data for the inspection and testing specified in **2.1.3-1**, if there are differences in the technical content on the licensee's production drawings and data of the reciprocating internal combustion engine compared to the drawings and data of the reciprocating internal combustion engine whose type approval has been obtained by the licensor, the licensee is to submit "Confirmation of the licensor's acceptance of licensee's modifications" approved by the licensor and signed by the licensee and licensor. If the licensor acceptance is not confirmed, the reciprocating internal combustion engine manufactured by the licensee is to be regarded as a different engine type and is **2.1.1-2** is to apply to the reciprocating internal combustion engine.	reciprocating internal combustion engines to be produced, the affected drawings and data are to be resubmitted to the Society as specified separately by the Society. (2) Drawings and data for the inspection and testing of reciprocating internal combustion engines (a) The licensee is to develop the drawings and data for the inspection and testing specified in **2.1.3-1** and a comparison list of these drawings and data to the drawings and data of the reciprocating internal combustion engine whose approval of use has been obtained by the licensor and submit these drawings and the comparison list to the Society. (b) As for the drawings and data for the inspection and testing specified in **2.1.3-1**, if there are differences in the technical content on the licensee's production drawings and data of the reciprocating internal combustion engine compared to the drawings and data of the reciprocating internal combustion engine whose approval of use has been obtained by the licensor, the licensee is to submit "Confirmation of the licensor's acceptance of licensee's modifications" approved by the licensor and signed by the licensee and licensor. If the licensor acceptance is not confirmed, the reciprocating internal combustion engine manufactured by the licensee is to be regarded as a different engine type and is **2.1.1-2** is to apply to the reciprocating internal combustion engine.	Terminology alignment Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
((c) to (e) are omitted.) ((3) to (6) are omitted.)	((c) to (e) are omitted.) ((3) to (6) are omitted.)	

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
RULES FOR THE SURVEY AND CONSTRUCTION OF INLAND WATERWAY SHIPS **Part 7 MACHINERY INSTALLATIONS** **Chapter 2 RECIPROCATING INTERNAL COMBUSTION ENGINES** **2.1 General** **2.1.1 General*** **2** For each type of reciprocating internal combustion engines, type approval is to be obtained by the engine designer (hereinafter referred to "licensor" in this Chapter) as specified separately by the Society. **2.1.3 Drawings and Data*** **2** The drawings and data for the inspection and testing specified in **-1** (the items represented by the mark ○ in **Table 7.2.1(a)** and **Table 7.2.1(b)**, hereinafter indicated in the same way throughout this Chapter) are to be submitted in accordance with **2.1.4-1** by the engine manufacturer producing engines with the drawings and data whose type approval has been obtained in accordance with **2.1.1-2** (hereinafter referred to as "licensee" in this Chapter). Such drawings and data, however, may be submitted by the licensor	**RULES FOR THE SURVEY AND CONSTRUCTION OF INLAND WATERWAY SHIPS** **Part 7 MACHINERY INSTALLATIONS** **Chapter 2 RECIPROCATING INTERNAL COMBUSTION ENGINES** **2.1 General** **2.1.1 General*** **2** For each type of reciprocating internal combustion engines, an approval of use is to be obtained by the engine designer (hereinafter referred to "licensor" in this Chapter) as specified separately by the Society. **2.1.3 Drawings and Data*** **2** The drawings and data for the inspection and testing specified in **-1** (the items represented by the mark ○ in **Table 7.2.1(a)** and **Table 7.2.1(b)**, hereinafter indicated in the same way throughout this Chapter) are to be submitted in accordance with **2.1.4-1** by the engine manufacturer producing engines with the drawings and data whose approval of use has been obtained in accordance with **2.1.1-2** (hereinafter referred to as "licensee" in this Chapter). Such drawings and data, however, may be submitted by the licensor	Terminology alignment Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

<table>
<tr><th>Amended</th><th>Original</th><th>Remarks</th></tr>
<tr><td>in accordance with 2.1.4-2.</td><td>in accordance with 2.1.4-2.</td><td></td></tr>
<tr><td colspan="2">Table 7.2.1(a) Drawings and Data for Approval
<table>
<tr><th></th><th>Items</th><th>For inspection and testing</th></tr>
<tr><td></td><td>(Omitted)</td><td></td></tr>
<tr><td></td><td>(b) Category B turbochargers
i) Sectional assembly (including principal dimensions and materials of housing components for containment evaluation.)
ii) Documentation of containment in the event of the disc fracture specified in 2.5.1-6
iii) Documentation of following operational data and limitations
・Maximum permissible operating speed (rpm)
・Maximum permissible exhaust gas temperature at the turbine inlet
・Minimum lubrication oil inlet pressure
・Maximum permissible vibration levels (self- and externally generated vibrations)
・Alarm level for exhaust gas temperature at the turbine inlet (levels are also to be indicated on engine control system diagrams)
・Lubrication oil inlet pressure low alarm set point (levels are also to be indicated on engine control system diagrams)
・Lubrication oil outlet temperature high alarm set point (levels are also to be indicated on engine control system diagrams)
iv) Diagram of lubrication oil systems (diagrams included in piping arrangements fitted to engines may be accepted instead)
v) Test report of type approval test (only for type approval tests)
vi) Test procedure (only for type approval tests)
(Omitted)</td><td></td></tr>
<tr><td colspan="3">(Omitted)</td></tr>
</table></td><td>Terminology alignment</td></tr>
</table>

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Table 7.2.1(b) Drawings and Data for Reference <table><tr><td></td><td>Items</td><td>For inspection and testing</td></tr><tr><td colspan="3">(Omitted)</td></tr><tr><td>(31)</td><td>Certification of ~~an approval of use~~ a type approval for environmental tests, control components(2)</td><td>○</td></tr><tr><td colspan="3">(Omitted)</td></tr></table>		Terminology alignment
2.1.4 Approval of Reciprocating Internal Combustion Engines*	**2.1.4 Approval of Reciprocating Internal Combustion Engines***	
1 Reciprocating internal combustion engines are to be approved in accordance with the following **(1)** to **(6)**:	**1** Reciprocating internal combustion engines are to be approved in accordance with the following **(1)** to **(6)**:	
(1) Development of documents and data for engine production	(1) Development of documents and data for engine production	
(a) (Omitted)	(a) (Omitted)	
(b) Each type of reciprocating internal combustion engine is to be provided with a certificate of type approval obtained by the licensor in accordance with **2.1.1-2**. For the first engine of a type or for those with no service records, the process of an approval of use and the approval process for production by the licensee may be performed simultaneously.	(b) Each type of reciprocating internal combustion engine is to be provided with a certificate of approval of use obtained by the licensor in accordance with **2.1.1-2**. For the first engine of a type or for those with no service records, the process of an approval of use and the approval process for production by the licensee may be performed simultaneously.	Terminology alignment
(c) The licensor is to review the drawings and data of the reciprocating internal combustion engine whose type approval has been obtained for the application and develop, if necessary, application specific drawings and data for production of reciprocating internal combustion engines for the use of the licensee in developing the reciprocating internal combustion engine specific	(c) The licensor is to review the drawings and data of the reciprocating internal combustion engine whose approval of use has been obtained for the application and develop, if necessary, application specific drawings and data for production of reciprocating internal combustion engines for the use of the licensee in developing the reciprocating internal combustion engine specific	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
production drawings and data for the inspection and testing specified in **2.1.3-1**.	production drawings and data for the inspection and testing specified in **2.1.3-1**.	
(d) If substantive modifications to the drawings and data of the reciprocating internal combustion engine whose type approval has been obtained have been made in the drawings and data of reciprocating internal combustion engines to be produced, the affected drawings and data are to be resubmitted to the Society as specified separately by the Society.	(d) If substantive modifications to the drawings and data of the reciprocating internal combustion engine whose approval of use has been obtained have been made in the drawings and data of reciprocating internal combustion engines to be produced, the affected drawings and data are to be resubmitted to the Society as specified separately by the Society.	Terminology alignment
(2) Drawings and data for the inspection and testing of reciprocating internal combustion engines	(2) Drawings and data for the inspection and testing of reciprocating internal combustion engines	
(a) The licensee is to develop the drawings and data for the inspection and testing specified in **2.1.3-1** and a comparison list of these drawings and data to the drawings and data of the reciprocating internal combustion engine whose type approval has been obtained by the licensor and submit these drawings and the comparison list to the Society.	(a) The licensee is to develop the drawings and data for the inspection and testing specified in **2.1.3-1** and a comparison list of these drawings and data to the drawings and data of the reciprocating internal combustion engine whose approval of use has been obtained by the licensor and submit these drawings and the comparison list to the Society.	Terminology alignment
(b) As for the drawings and data for the inspection and testing specified in **2.1.3-1**, if there are differences in the technical content on the licensee's production drawings and data of the reciprocating internal combustion engine compared to the drawings and data of the reciprocating internal combustion engine whose type approval has been obtained by the licensor, the licensee is to submit "Confirmation of the licensor's acceptance of licensee's modifications" approved by the licensor and	(b) As for the drawings and data for the inspection and testing specified in **2.1.3-1**, if there are differences in the technical content on the licensee's production drawings and data of the reciprocating internal combustion engine compared to the drawings and data of the reciprocating internal combustion engine whose approval of use has been obtained by the licensor, the licensee is to submit "Confirmation of the licensor's acceptance of licensee's modifications" approved by the licensor and	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
signed by the licensee and licensor. If the licensor acceptance is not confirmed, the reciprocating internal combustion engine manufactured by the licensee is to be regarded as a different engine type and is **2.1.1-2** is to apply to the reciprocating internal combustion engine. ((c) to (e) are omitted.) ((3) to (6) are omitted.)	signed by the licensee and licensor. If the licensor acceptance is not confirmed, the reciprocating internal combustion engine manufactured by the licensee is to be regarded as a different engine type and is **2.1.1-2** is to apply to the reciprocating internal combustion engine. ((c) to (e) are omitted.) ((3) to (6) are omitted.)	
2.6 Tests	**2.6 Tests**	
2.6.1 Shop Tests*	**2.6.1 Shop Tests***	
2 For reciprocating internal combustion engines, the purpose of the shop trials is to verify design premises such as engine power, safety against fire, adherence to approved limits such as maximum pressure, and functionality as well as to establish reference values or base lines for later reference in the operational phase. The programme is to be in accordance with the following: ((1) to (5) are omitted.) (6) The following **(a)** to **(c)** are to be inspected. However, a part of or all of these inspections may be postponed until shipboard testing when agreed to by the Society. (a) (Omitted) (b) (Omitted) (c) Temperature of hot surface insulation Random temperature readings are to be compared with corresponding readings obtained during the type approval test. This is to be done while running at the	**2** For reciprocating internal combustion engines, the purpose of the shop trials is to verify design premises such as engine power, safety against fire, adherence to approved limits such as maximum pressure, and functionality as well as to establish reference values or base lines for later reference in the operational phase. The programme is to be in accordance with the following: ((1) to (5) are omitted.) (6) The following **(a)** to **(c)** are to be inspected. However, a part of or all of these inspections may be postponed until shipboard testing when agreed to by the Society. (a) (Omitted) (b) (Omitted) (c) Temperature of hot surface insulation Random temperature readings are to be compared with corresponding readings obtained during the type test. This is to be done while running at the rated	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
rated power of engine. If the insulation is modified subsequently to the type approval test, the Society may request temperature measurements as required by the type approval test. In the case of reciprocating internal combustion engine with an application for approval of use dated before 1 July 2016 which is an engine type that does not have the results of temperature measurements required by the type approval test, temperature measurements are to be performed by a procedure deemed appropriate by the Society. ((7) and (8) are omitted.)	power of engine. If the insulation is modified subsequently to the type test, the Society may request temperature measurements as required by the type test. In the case of reciprocating internal combustion engine with an application for approval of use dated before 1 July 2016 which is an engine type that does not have the results of temperature measurements required by the type test, temperature measurements are to be performed by a procedure deemed appropriate by the Society. ((7) and (8) are omitted.)	
Table 7.2.9 Programme for Shop Trials of Engines (Table is omitted.) Notes: ((1) to (10) are omitted.) (11) The scope of the open-up inspection is to be as deemed appropriate by the surveyor. The omission of the open-up inspection may be considered by the Society provided that all of the following(a)through(g)re met: (a) It is not the open-up inspection to be carried out during the approval test specified in **Chapter 8, Part 6 of the Guidance for the Approval ~~and Type Approval~~ of Materials and Equipment for Marine Use**. ((b) to (g) are omitted.)		Changes due to the renaming of the "Guidance for the Approval"
Table 7.10.8 Application Classifications of Mechanical Joints(1) (Table is omitted.) (1) +: Application is allowed; -: Application is not allowed (2) Fire endurance test in accordance with **9.3.2(6), Part 6 of Guidance for the Approval ~~and Type Approval~~ of Materials and Equipment for Marine Use.** ((3) to (11) are omitted)		Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Chapter 14 AUTOMATIC AND REMOTE CONTROL	**Chapter 14 AUTOMATIC AND REMOTE CONTROL**	
14.7 Tests	**14.7 Tests**	
		Terminology alignment
14.7.2 Type Approval	**14.7.2 Approval of Use**	
1 In cases where automatic devices and automatic equipment have passed the environmental tests specified in **14.7.1**, they will receive type approval from the Society; and, upon request from the manufacturer, the Society will make this information public.	**1** In cases where automatic devices and automatic equipment have passed the environmental tests specified in **14.7.1**, they will receive approval of use from the Society; and, upon request from the manufacturer, the Society will make this information public.	Terminology alignment
2 With respect to all automatic devices and automatic equipment which have already received type approval from the Society, a part or all of the environmental test specified in **14.7.1(1)** may be omitted.	**2** With respect to all automatic devices and automatic equipment which have already received approval of use from the Society, a part or all of the environmental test specified in **14.7.1(1)** may be omitted.	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part B CLASS SURVEYS** **B1 GENERAL** **B1.1 Surveys** **B1.1.3 Intervals of Class Maintenance Surveys** **3** The Occasional Surveys specified in **1.1.3-3(5), Part B of the Rules** are as specified below: ((1) to (12) are omitted.) (13) Devices to prevent the passage of flame (flame screen, flame arrester, detonation flame arrester and high velocity device) For devices to prevent the passage of flame required to ships which had been at the beginning stage of construction before 1 January 2013 and for ships which carry cargos shown as apparatus groups II*B*, II*C* or no apparatus group assigned in the column *i*" of **Table S17.1, Part S of the Rules**, a survey is to be carried out to verify that the devices are in compliance with **7.4.2-2, Chapter 7, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use** by the first scheduled dry-docking after 1 January 2013.	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part B CLASS SURVEYS** **B1 GENERAL** **B1.1 Surveys** **B1.1.3 Intervals of Class Maintenance Surveys** **3** The Occasional Surveys specified in **1.1.3-3(5), Part B of the Rules** are as specified below: ((1) to (12) are omitted.) (13) Devices to prevent the passage of flame (flame screen, flame arrester, detonation flame arrester and high velocity device) For devices to prevent the passage of flame required to ships which had been at the beginning stage of construction before 1 January 2013 and for ships which carry cargos shown as apparatus groups II*B*, II*C* or no apparatus group assigned in the column *i*" of **Table S17.1, Part S of the Rules**, a survey is to be carried out to verify that the devices are in compliance with **7.4.2-2, Chapter 7, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** by the first scheduled dry-docking after 1 January 2013.	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
((14) to (27) are omitted.)	((14) to (27) are omitted.)	
B8 PROPELLER SHAFT AND STERN TUBE SHAFT SURVEYS	**B8 PROPELLER SHAFT AND STERN TUBE SHAFT SURVEYS**	
B8.1 General	**B8.1 General**	
B8.1.2 Preventive Maintenance System of Shafts **2** The wording "Remote monitoring devices for weardown of shaft deemed appropriate by the Society" in **8.1.2-2(7), Part B of the Rules** means devices approved by the Society in accordance with **Chapter 1, Part 7 of Guidance for the Approval of Materials and Equipment for Marine Use**.	**B8.1.2 Preventive Maintenance System of Shafts** **2** The wording "Remote monitoring devices for weardown of shaft deemed appropriate by the Society" in **8.1.2-2(7), Part B of the Rules** means devices approved by the Society in accordance with **Chapter 1, Part 7 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
B9 PLANNED MACHINERY SURVEYS	**B9 PLANNED MACHINERY SURVEYS**	
B9.1 Planned Machinery Surveys	**B9.1 Planned Machinery Surveys**	
B9.1.3 Planned Machinery Maintenance Scheme (PMS) **4** Approval of PMS Conditions for approval of PMS are as follows: ((1) to (4) are omitted.) (5) Computer Computers used for maintenance management system	**B9.1.3 Planned Machinery Maintenance Scheme (PMS)** **4** Approval of PMS Conditions for approval of PMS are as follows: ((1) to (4) are omitted.) (5) Computer Computers used for maintenance management system	In order to relocate "PROCEDURES FOR THE APPROVAL OF PMS/CBM MANAGEMENT SOFTWARE" to Chapter

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
are to satisfy the following requirements specified in **(a)** through **(f)**: ((a) to (e) are omitted.) (f) It is recommended that the software is approved in accordance with **Chapter 1, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**.	are to satisfy the following requirements specified in **(a)** through **(f)**: ((a) to (e) are omitted.) (f) It is recommended that the software is approved in accordance with **Annex 9.1.3 "PROCEDURES FOR APPROVAL OF PMS/CBM MANAGEMENT SOFTWARE" of the Rules**.	1, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use, the current requirement is chenged.
B9.1.4 Condition Based Maintenance Scheme (CBM) **5** Approval of CBM Conditions for approval of CBM are as follows: (1) (Omitted) (2) Condition monitoring system The condition monitoring system is to satisfy the following requirements specified in **(a)** to **(h)**. In cases where this system is modified, that modification is to be approved by the Society. ((a) and (b) are omitted.) (c) In addition to **(b)**, the software is to have condition monitoring function specified in **Chapter 1, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use** and be suited to diagnosing any deterioration of machinery, equipment or associated components on the basis of the data from the sensors or centralized machinery monitoring and control systems specified in **(a)**. The software is to be suitable for diagnosing the condition of equipment or its components on the basis of independent or coalesced data, or their	**B9.1.4 Condition Based Maintenance Scheme (CBM)** **5** Approval of CBM Conditions for approval of CBM are as follows: (1) (Omitted) (2) Condition monitoring system The condition monitoring system is to satisfy the following requirements specified in **(a)** to **(h)**. In cases where this system is modified, that modification is to be approved by the Society. ((a) and (b) are omitted.) (c) In addition to **(b)**, the software is to have condition monitoring function specified in **Annex 9.1.3 "PROCEDURES FOR APPROVAL OF PMS/CBM MANAGEMENT SOFTWARE" of the Rules** and be suited to diagnosing any deterioration of machinery, equipment or associated components on the basis of the data from the sensors or centralized machinery monitoring and control systems specified in **(a)**. The software is to be suitable for diagnosing the condition of equipment or its components on the basis of independent or	In order to relocate "PROCEDURES FOR THE APPROVAL OF PMS/CBM MANAGEMENT SOFTWARE" to Chapter 1, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use, the current requirement is chenged.

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
trends. ((d) to (h) are omitted.) (3) Maintenance management system The maintenance management system is to have the maintenance records function specified in **Chapter 1, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**. This function may be incorporated into the condition monitoring system specified in **(2)**. ((4) to (7) are omitted.)	coalesced data, or their trends. ((d) to (h) are omitted.) (3) Maintenance management system The maintenance management system is to have the maintenance records function specified in **Annex 9.1.3 "PROCEDURES FOR APPROVAL OF PMS/CBM MANAGEMENT SOFTWARE" of the Rules**. This function may be incorporated into the condition monitoring system specified in **(2)**. ((4) to (7) are omitted.)	

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part C HULL CONSTRUCTION AND EQUIPMENT** **Part 1 GENERAL HULL REQUIREMENTS** **C13 RUDDERS** **C13.2 Rudders** **C13.2.10 Bearings of Rudder Stocks and Pintles** **C13.2.10.2 Minimum Bearing Surface** **1** (Omitted) **2** "The type as deemed appropriate by the Society" stipulated in **Table 13.2.10-1, Part C of the Rules** means that approval is to be made in accordance with the requirements of **Chapter 5, Part 5 of Guidance for the Approval of Materials and Equipment for Marine Use**.	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part C HULL CONSTRUCTION AND EQUIPMENT** **Part 1 GENERAL HULL REQUIREMENTS** **C13 RUDDERS** **C13.2 Rudders** **C13.2.10 Bearings of Rudder Stocks and Pintles** **C13.2.10.2 Minimum Bearing Surface** **1** (Omitted) **2** "The type as deemed appropriate by the Society" stipulated in **Table 13.2.10-1, Part C of the Rules** means that approval is to be made in accordance with the requirements of **Chapter 5, Part 4 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval" Changes due to the reorganization of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part U INTACT STABILITY** **Annex U1.2.2 GUIDANCE FOR STABILITY COMPUTER** **1.3 Hardware for Stability Computer** **1.3.1 Hardware Requirements** **1** Hardware for stability computers is recommended to be of approved type in accordance with the requirements of **Chapter 2, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use "APPROVAL OF USE OF LOADING COMPUTER"**.	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part U INTACT STABILITY** **Annex U1.2.2 GUIDANCE FOR STABILITY COMPUTER** **1.3 Hardware for Stability Computer** **1.3.1 Hardware Requirements** **1** Hardware for stability computers is recommended to be of approved type in accordance with the requirements of **Chapter 2, Part 7 of the Guidance for the Approval <u>and Type Approval</u> of Materials and Equipment for Marine Use "APPROVAL OF USE OF LOADING COMPUTER"**.	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part W NAVIGATION BRIDGE VISIBILITY** **W1 GENERAL** **W1.1 General** **W1.1.2 Ships of Unconventional Design** The use of remote camera systems for ships of unconventional design specified in **1.1.2 of the Rules** (excluding the ships mentioned in the provisory requirement specified in **2.1.4(2) of the Rules**) may be accepted as an alternative to **2.1.4 of the Rules** provided that they are deemed by the Society to comply with the following requirements **(1)** to **(5)**, subject to acceptance by the flag state authority. (1) (Omitted) (2) (Omitted) (3) The remote camera systems are to be capable of continuous operation under environmental conditions in **Table 7.1-1, Chapter 1, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use**. (4) (Omitted) (5) （(Omitted)	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part W NAVIGATION BRIDGE VISIBILITY** **W1 GENERAL** **W1.1 General** **W1.1.2 Ships of Unconventional Design** The use of remote camera systems for ships of unconventional design specified in **1.1.2 of the Rules** (excluding the ships mentioned in the provisory requirement specified in **2.1.4(2) of the Rules**) may be accepted as an alternative to **2.1.4 of the Rules** provided that they are deemed by the Society to comply with the following requirements **(1)** to **(5)**, subject to acceptance by the flag state authority. (1) (Omitted) (2) (Omitted) (3) The remote camera systems are to be capable of continuous operation under environmental conditions in **Table 7.1-1, Chapter 1, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. (4) (Omitted) (5) (Omitted)	Changes due to the renaming of the “Guidance for the Approval”

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part CS HULL CONSTRUCTION AND EQUIPMENT OF SMALL SHIPS** **CS3 RUDDERS** **CS3.11 Bearings of Rudder Stocks and Pintles** **CS3.11.1 Minimum Bearing Surface** **2** "The type as deemed appropriate by the Society" stipulated in **Table CS3.3, Part CS** of the Rules means that approval is to be made in accordance with the requirements of **Chapter 5, Part 5 of Guidance for the Approval of Materials and Equipment for Marine Use**.	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part CS HULL CONSTRUCTION AND EQUIPMENT OF SMALL SHIPS** **CS3 RUDDERS** **CS3.11 Bearings of Rudder Stocks and Pintles** **CS3.11.1 Minimum Bearing Surface** **2** "The type as deemed appropriate by the Society" stipulated in **Table CS3.3, Part CS** of the Rules means that approval is to be made in accordance with the requirements of **Chapter 5, Part 4 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval" Changes due to the reorganization of the "Guidance for the Approval"

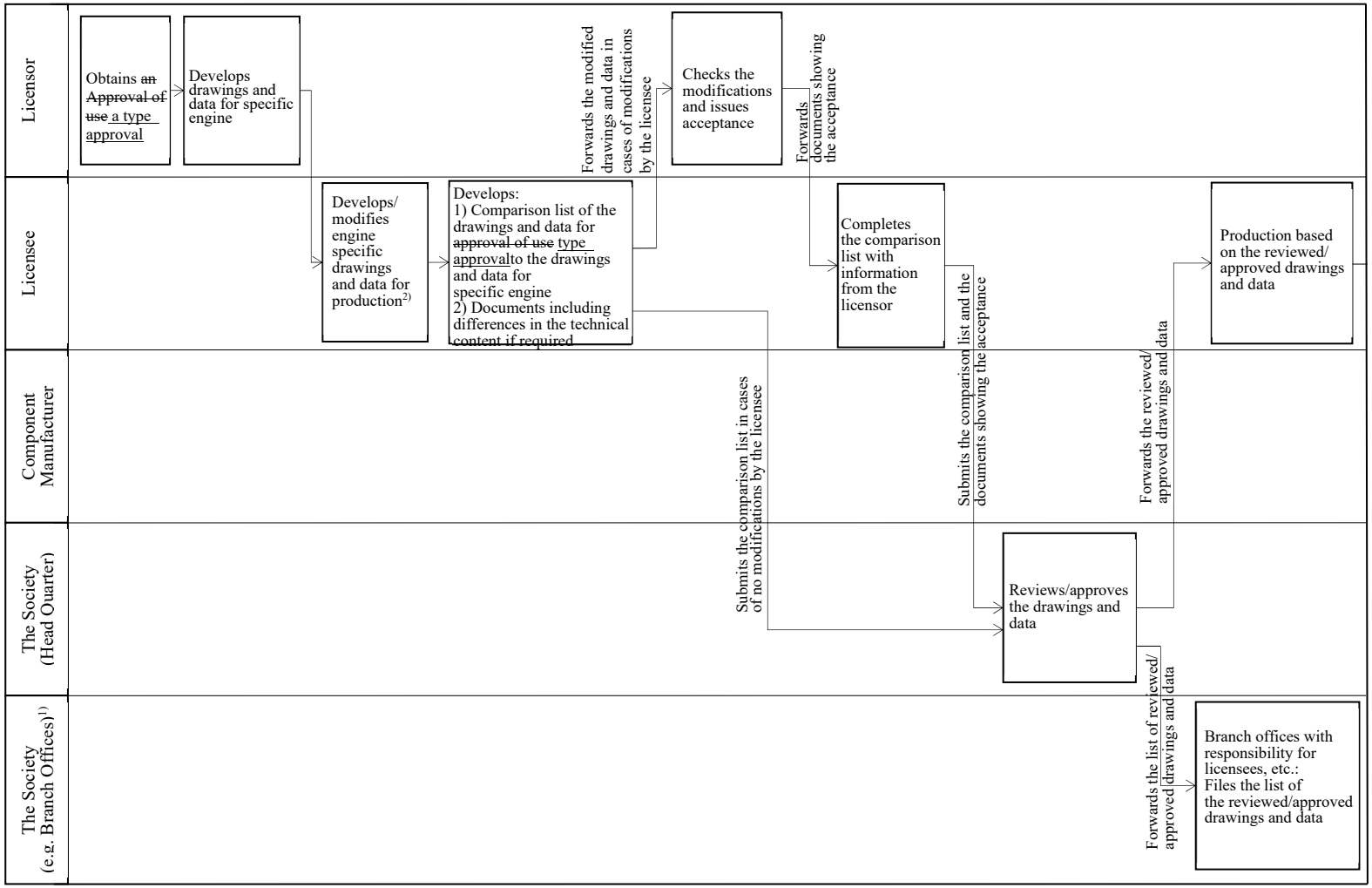
Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS**	
Part D MACHINERY INSTALLATIONS	**Part D MACHINERY INSTALLATIONS**	
D2 RECIPROCATING INTERNAL CONBUSTION ENGINES	**D2 RECIPROCATING INTERNAL CONBUSTION ENGINES**	
D2.1 General	**D2.1 General**	
D2.1.1 General The wording "as specified separately by the Society" specified in **2.1.1-3, Part D of the Rules** means "in accordance with **Chapter 8, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**".	**D2.1.1 General** The wording "as specified separately by the Society" specified in **2.1.1-3, Part D of the Rules** means "in accordance with **Chapter 8, Part 6 of Guidance for the Approval <u>and Type Approval</u> of Materials and Equipment for Marine Use**".	Changes due to the renaming of the "Guidance for the Approval"
D2.1.4 Approval of Reciprocating Internal Combustion Engines **2** The phrase "design approval is to be obtained as specified separately by the Society" specified in **2.1.4-1(1)(a), Part D of the Rules** means that the design approval and design appraisal are to be obtained in accordance with **Chapter 8, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**.	**D2.1.4 Approval of Reciprocating Internal Combustion Engines** **2** The phrase "design approval is to be obtained as specified separately by the Society" specified in **2.1.4-1(1)(a), Part D of the Rules** means that the design approval and design appraisal are to be obtained in accordance with **Chapter 8, Part 6 of Guidance for the Approval <u>and Type Approval</u> of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
3 The wording "the drawings and data of the reciprocating internal combustion engine whose <u>type approval</u>	**3** The wording "the drawings and data of the reciprocating internal combustion engine whose <u>approval of</u>	Changes due to the renaming of the

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

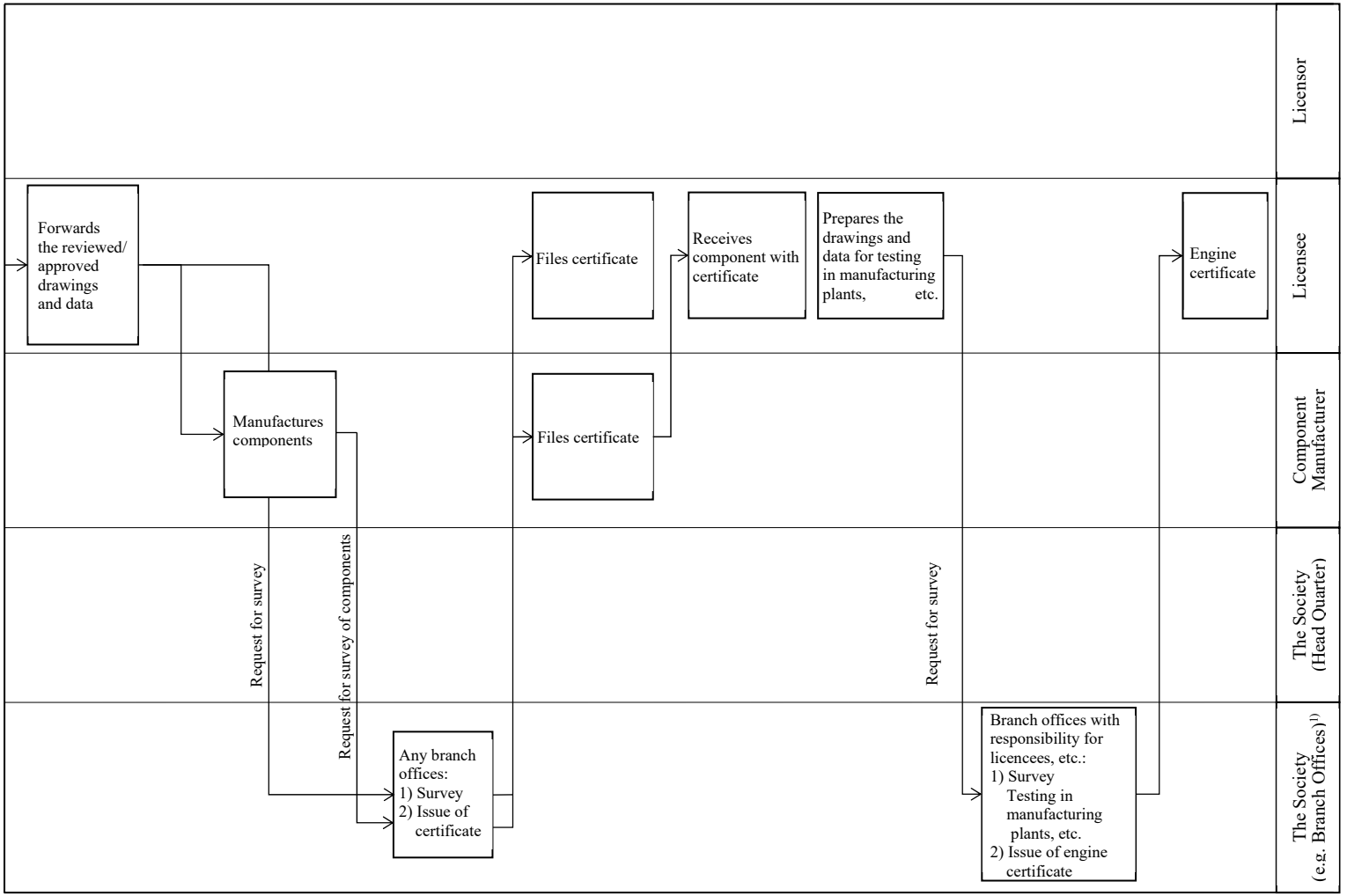
Amended	Original	Remarks
has been obtained" specified in **(1)(c)**, **(1)(d)**, **(2)(a)** and **(2)(b)** of **2.1.4-1, Part D of the Rules** means those listed in **8.2.2, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**.	use has been obtained" specified in **(1)(c)**, **(1)(d)**, **(2)(a)** and **(2)(b)** of **2.1.4-1, Part D of the Rules** means those listed in **8.2.2, Part 6 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	"Guidance for the Approval" Terminology alignment
4 The wording "as specified separately by the Society" specified in **2.1.4-1(1)(d), Part D of the Rules** means "in accordance with **8.2.2-2, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**".	**4** The wording "as specified separately by the Society" specified in **2.1.4-1(1)(d), Part D of the Rules** means "in accordance with **8.2.2-2, Part 6 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**".	Changes due to the renaming of the "Guidance for the Approval"
6 The wording "as specified separately by the Society" specified in **2.1.4-1(4)(a), Part D of the Rules** means "in accordance with **8.2.2-4, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**".	**6** The wording "as specified separately by the Society" specified in **2.1.4-1(4)(a), Part D of the Rules** means "in accordance with **8.2.2-4, Part 6 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**".	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Fig. D2.1.4-1 Flow of Approval of Reciprocating Internal Combustion Engines  1) Branch offices with responsibility for licensees and/or component manufacturers in different locations 2) In cases of modifications by the licensee, refer to **(b)** and **(c)** of **2.1.4-1(2), Part D of the Rules**		Terminology alignment

Amended	Original	Remarks

Fig. D2.1.4-1 Flow of Approval of Reciprocating Internal Combustion Engines (continued)



Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
D2.4 Safety Devices	**D2.4 Safety Devices**	
D2.4.3 Protection against Crankcase Explosion **1** The wording "explosion relief valves of approved type" in **2.4.3-1, Part D of the Rules** means those valves approved by the Society in accordance with **Chapter 10, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**. **3** The installation and maintenance manual specified in **2.4.3-1(5), Part D of the Rules** is to contain the following information: (1) Description of valve with details of function and design limits (2) Copy of type approval test certification (3) Installation instructions (4) Maintenance in service instructions to include testing and renewal of any sealing arrangements (5) Actions required after a crankcase explosion	**D2.4.3 Protection against Crankcase Explosion** **1** The wording "explosion relief valves of approved type" in **2.4.3-1, Part D of the Rules** means those valves approved by the Society in accordance with **Chapter 10, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. **3** The installation and maintenance manual specified in **2.4.3-1(5), Part D of the Rules** is to contain the following information: (1) Description of valve with details of function and design limits (2) Copy of type test certification (3) Installation instructions (4) Maintenance in service instructions to include testing and renewal of any sealing arrangements (5) Actions required after a crankcase explosion	Changes due to the renaming of the "Guidance for the Approval" Terminology alignment
D2.4.5 Crankcase Oil Mist Detection Arrangements **2** The wording "crankcase oil mist detection arrangements required to be fitted to engines are to be approved type" stipulated in **2.4.5-2, Part D of the Rules** refers to crankcase oil mist detection arrangement approved in accordance with **Chapter 6, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**D2.4.5 Crankcase Oil Mist Detection Arrangements** **2** The wording "crankcase oil mist detection arrangements required to be fitted to engines are to be approved type" stipulated in **2.4.5-2, Part D of the Rules** refers to crankcase oil mist detection arrangement approved in accordance with **Chapter 6, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
D2.6 Tests	**D2.6 Tests**	
D2.6.1 Shop Tests	**D2.6.1 Shop Tests**	
1 The wording "a procedure deemed appropriate by the Society" in **2.6.1-2(6)(c), Part D of the Rules** means the tests specified in **8.5.2-2(10), Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**1** The wording "a procedure deemed appropriate by the Society" in **2.6.1-2(6)(c), Part D of the Rules** means the tests specified in **8.5.2-2(10), Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
2 The wording "a procedure deemed appropriate by the Society" in **2.6.1-3(5), Part D of the Rules** means the tests specified in **8.3, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**2** The wording "a procedure deemed appropriate by the Society" in **2.6.1-3(5), Part D of the Rules** means the tests specified in **8.3, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
5 The wording "a procedure deemed appropriate by the Society" in **2.6.1-7, Part D of the Rules** means the tests specified in **Chapter 11, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**5** The wording "a procedure deemed appropriate by the Society" in **2.6.1-7, Part D of the Rules** means the tests specified in **Chapter 11, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
D6 SHAFTINGS	**D6 SHAFTINGS**	
D6.2 Materials, Construction and Strength	**D6.2 Materials, Construction and Strength**	
D6.2.7 Corrosion Protection of Propeller Shafts and Stern Tube Shafts	**D6.2.7 Corrosion Protection of Propeller Shafts and Stern Tube Shafts**	
2 The wording "corrosion resistant materials approved by the Society" in **6.2.7-1(3), Part D of the Rules** means those materials which have been subjected to approval tests	**2** The wording "corrosion resistant materials approved by the Society" in **6.2.7-1(3), Part D of the Rules** means those materials which have been subjected to approval tests	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
specified in **2.4.2-5, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use** and then which obtain type approval of machinery and equipment as a corrosion resistant material for propeller shafts or stern tube shafts. In addition, *KSUSF*316, *KSUSF*316*L*, *KSUS*316-*SU* or *KSUS*316*L*-*SU* used for the propeller shafts exceeding 200 *mm* in diameter are also to be in accordance with this requirement to obtain type approval of use of machinery and equipment as a corrosion resistant material for propeller shafts or stern tube shafts.	specified in **2.4.2-5, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** and then which obtain type approval of use of machinery and equipment as a corrosion resistant material for propeller shafts or stern tube shafts. In addition, *KSUSF*316, *KSUSF*316*L*, *KSUS*316-*SU* or *KSUS*316*L*-*SU* used for the propeller shafts exceeding 200 *mm* in diameter are also to be in accordance with this requirement to obtain type approval of use of machinery and equipment as a corrosion resistant material for propeller shafts or stern tube shafts.	Terminology alignment
D12 PIPES, VALVES, PIPE FITTINGS AND AUXILIARIES	**D12 PIPES, VALVES, PIPE FITTINGS AND AUXILIARIES**	
D12.1 General	**D12.1 General**	
D12.1.6 Use of Special Materials **1** The wording "requirements specified otherwise" in **12.1.6, Part D of the Rules** means as follows. (1) In cases where rubber hoses, Teflon hoses or nylon hoses are used for the following pipes, materials approved in accordance with **Guidance for the Approval of Materials and Equipment for Marine Use** are to be used. (a) Pipes of Group I or Group II (b) Pipes likely to cause fire or flooding in cases where they rupture (2) Only plastic pipes (including vinyl pipes) approved by the Society in accordance with **Chapter 6, Part 6**	**D12.1.6 Use of Special Materials** **1** The wording "requirements specified otherwise" in **12.1.6, Part D of the Rules** means as follows. (1) In cases where rubber hoses, Teflon hoses or nylon hoses are used for the following pipes, materials approved in accordance with **Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** are to be used. (a) Pipes of Group I or Group II (b) Pipes likely to cause fire or flooding in cases where they rupture (2) Only plastic pipes (including vinyl pipes) approved by the Society in accordance with **Chapter 6, Part 6**	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
of the Guidance for the Approval of Materials and Equipment for Marine Use are to be used.	**of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** are to be used.	Changes due to the renaming of the "Guidance for the Approval"
(3) (Omitted)	(3) (Omitted)	
D12.3 Construction of Valves and Pipe Fittings	**D12.3 Construction of Valves and Pipe Fittings**	
D12.3.3 Mechanical Joints	**D12.3.3 Mechanical Joints**	
1 The wording "type approved by the Society" referred to in **12.3.3-2, Part D of the Rules** means one whose approval of use is obtained in accordance with **Chapter 9, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**1** The wording "type approved by the Society" referred to in **12.3.3-2, Part D of the Rules** means one whose approval of use is obtained in accordance with **Chapter 9, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval" Terminology alignment
2 Details of the pressure referred to in **12.3.3-5, Part D of the Rules** are specified in **9.3.2(4)** of **Chapter 9, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**2** Details of the pressure referred to in **12.3.3-5, Part D of the Rules** are specified in **9.3.2(4)** of **Chapter 9, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
3 The wording "standards separately specified by the Society" referred to in **12.3.3-7, Part D of the Rules** refers to **Chapter 9, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**3** The wording "standards separately specified by the Society" referred to in **12.3.3-7, Part D of the Rules** refers to **Chapter 9, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
4 The wording "where deemed necessary by the Society" referred to in **(2)** and **(4)** as well as **(6)** to **(8)** of **12.3.3-7, Part D of the Rules** is in accordance with **Table 6.9-1** of **Chapter 9, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**4** The wording "where deemed necessary by the Society" referred to in **(2)** and **(4)** as well as **(6)** to **(8)** of **12.3.3-7, Part D of the Rules** is in accordance with **Table 6.9-1** of **Chapter 9, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
D12.3.4 Flexible Hose Assemblies **1** The wording " approved by the Society" referred to in **12.3.4-2, Part D of the Rules** means one whose approval is obtained in accordance with **2.4.2-11, Chapter 2, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**D12.3.4 Flexible Hose Assemblies** **1** The wording " approved by the Society" referred to in **12.3.4-2, Part D of the Rules** means one whose approval is obtained in accordance with **2.4.2-11, Chapter 2, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
D12.6 Tests	**D12.6 Tests**	
D12.6.1 Shop Tests **1** Testing of pipe joints of a butt welded type and pipe joints of a slip-on sleeve welded type (such as elbows, reducers, tees, bends and sockets, etc.) (1) Materials and tests of pipe joints of a butt welded type and pipe joints of a slip-on sleeve welded type used for Group I or II pipes are to be in accordance with the following: (a) Materials i) Materials for pipe joints are to comply with the requirements in **Part K** (see **D1.1.4(7)**). ii) Notwithstanding the requirement given in **i)**, materials complying with international or national standards such as *ISO*, *JIS*, etc. may be used for pipe joints for which hot forming or heat treatment is carried out during the manufacturing process, provided that they receive approval of use from the Society in accordance with **Chapter 12, Part 6 of the Guidance for the Approval and Type**	**D12.6.1 Shop Tests** **1** Testing of pipe joints of a butt welded type and pipe joints of a slip-on sleeve welded type (such as elbows, reducers, tees, bends and sockets, etc.) (1) Materials and tests of pipe joints of a butt welded type and pipe joints of a slip-on sleeve welded type used for Group I or II pipes are to be in accordance with the following: (a) Materials i) Materials for pipe joints are to comply with the requirements in **Part K** (see **D1.1.4(7)**). ii) Notwithstanding the requirement given in **i)**, materials complying with international or national standards such as *ISO*, *JIS*, etc. may be used for pipe joints for which hot forming or heat treatment is carried out during the manufacturing process, provided that they receive approval of use from the Society in accordance with **Chapter 12, Part 6 of the Guidance for the Approval and Type**	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Approval of Materials and Equipment for Marine Use. ((b) to (d) are omitted.) (e) Omission of surveyor attendance i) (Omitted) ii) With respect to pipe joints other than those specified in **i)** and **(1)(a)ii),** a Society surveyor need not be present during the tests specified in **(b)** to **(d)** when the requirements in **Chapter 4, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use** are satisfied. iii) (Omitted) (2) (Omitted) (3) (Omitted)	**Approval of Materials and Equipment for Marine Use**. ((b) to (d) are omitted.) (e) Omission of surveyor attendance i) (Omitted) ii) With respect to pipe joints other than those specified in **i)** and **(1)(a)ii),** a Society surveyor need not be present during the tests specified in **(b)** to **(d)** when the requirements in **Chapter 4, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** are satisfied. iii) (Omitted) (2) (Omitted) (3) (Omitted)	Terminology alignment Changes due to the renaming of the "Guidance for the Approval"
D13 PIPING SYSTEMS **D13.6 Air Pipes** **D13.6.2 Open Ends of Air Pipes** The wording "automatic closing devices" specified in **13.6.2-2**, **Part D of the Rules** means those approved by the Society in accordance with **2.4.2-10**, **Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**. For tankers, pressure-vacuum valves (PV valves) may be used in lieu of automatic closing devices. These valves are to be of a type approved by the Society in accordance with	**D13 PIPING SYSTEMS** **D13.6 Air Pipes** **D13.6.2 Open Ends of Air Pipes** The wording "automatic closing devices" specified in **13.6.2-2**, **Part D of the Rules** means those approved by the Society in accordance with **2.4.2-10**, **Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. For tankers, pressure-vacuum valves (PV valves) may be used in lieu of automatic closing devices. These valves are to be of a type approved by the	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
procedures deemed appropriate by the Society.	Society in accordance with procedures deemed appropriate by the Society.	
D13.8 Sounding Devices	**D13.8 Sounding Devices**	
D13.8.4 Construction of Liquid Level Indicators The wording "a type that has been approved by the Society" in **13.8.4, Part D of the Rules** means those liquid level indicators approved in accordance with the requirements of **Chapter 4, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use** and the wording "other standards approved by the Society" means *JIS F 7211* "5 K level gauges with valves", *JIS F 7215* "Flat glass oil level gauges" or any equivalent standards.	**D13.8.4 Construction of Liquid Level Indicators** The wording "a type that has been approved by the Society" in **13.8.4, Part D of the Rules** means those liquid level indicators approved in accordance with the requirements of **Chapter 4, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** and the wording "other standards approved by the Society" means *JIS F 7211* "5 K level gauges with valves", *JIS F 7215* "Flat glass oil level gauges" or any equivalent standards.	Changes due to the renaming of the "Guidance for the Approval"
D13.8.5 Water Level Detection and Alarm Systems for Bulk Carriers, etc. **3** The wording "the systems to have constructions and functions deemed appropriate by the Society" in **13.8.5-1(4), Part D of the Rules** means those systems complying with the following requirements and being of a type approved by the Society in accordance with **Chapter 5, Part 7 of Guidance for the Approval of Materials and Equipment for Marine Use** or those systems approved by an organisation deemed appropriate by the Society in accordance with the Resolution *MSC.*188(79), as amended. ((1) to (8) are omitted.) **7** Manuals specified in **13.8.5-4, Part D of the Rules** are	**D13.8.5 Water Level Detection and Alarm Systems for Bulk Carriers, etc.** **3** The wording "the systems to have constructions and functions deemed appropriate by the Society" in **13.8.5-1(4), Part D of the Rules** means those systems complying with the following requirements and being of a type approved by the Society in accordance with **Chapter 5, Part 7 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** or those systems approved by an organisation deemed appropriate by the Society in accordance with the Resolution *MSC.*188(79), as amended. ((1) to (8) are omitted.) **7** Manuals specified in **13.8.5-4, Part D of the Rules** are	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
to contain the following information and operational instructions: (1) (Omitted) (2) Evidence that the system has been approved in accordance with **Chapter 5, Part 7 of Guidance for the Approval of Materials and Equipment for Marine Use** or the Resolution *MSC.*188(79), as amended. ((3) to (8) are omitted.)	to contain the following information and operational instructions: (1) (Omitted) (2) Evidence that the system has been approved in accordance with **Chapter 5, Part 7 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** or the Resolution *MSC.*188(79), as amended. ((3) to (8) are omitted.)	Changes due to the renaming of the "Guidance for the Approval"
D14 PIPING SYSTEMS FOR TANKERS	**D14 PIPING SYSTEMS FOR TANKERS**	
D14.2 Cargo Oil Pumps, Cargo Oil Piping Systems, Piping in Cargo Oil Tanks, etc.	**D14.2 Cargo Oil Pumps, Cargo Oil Piping Systems, Piping in Cargo Oil Tanks, etc.**	
D14.2.8 Sounding Devices of Cargo Oil Tanks **3** In cases where level indicating devices are provided for those sounding devices specified in **14.2.8, Part D of the Rules**, such devices are to be of a type approved by the Society in accordance with **Chapter 4, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use**, which is separately specified. And, all approved devices are to be made public on the "**List of approved materials and equipment**".	**D14.2.8 Sounding Devices of Cargo Oil Tanks** **3** In cases where level indicating devices are provided for those sounding devices specified in **14.2.8, Part D of the Rules**, such devices are to be of a type approved by the Society in accordance with **Chapter 4, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**, which is separately specified. And, all approved devices are to be made public on the "**List of approved materials and equipment**".	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
D17 REFRIGERATING MACHINERY AND CONTROLLED ATMOSPHERE SYSTEMS	**D17 REFRIGERATING MACHINERY AND CONTROLLED ATMOSPHERE SYSTEMS**	
D17.1 General	**D17.1 General**	
D17.1.1 Scope **6** Ammonia refrigerating machinery materials ((1) to (4) are omitted.) (5) In cases where flat tanks of quick freezers (contact freezers) are manufactured by extrusion molding of aluminum alloys, materials are to be approved in accordance with **Chapter 5, Part 2 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**D17.1.1 Scope** **6** Ammonia refrigerating machinery materials ((1) to (4) are omitted.) (5) In cases where flat tanks of quick freezers (contact freezers) are manufactured by extrusion molding of aluminum alloys, materials are to be approved in accordance with **Chapter 5, Part 1 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval" Changes due to the reorganization of the "Guidance for the Approval"
D18 AUTOMATIC AND REMOTE CONTROL	**D18 AUTOMATIC AND REMOTE CONTROL**	
D18.7 Tests	**D18.7 Tests**	
D18.7.1 Shop Tests **2** The wording "The procedures for these tests are to be deemed appropriate by the Society" specified in **18.7.1(1), Part D of the Rules** means those procedures in accordance with **Chapter 1, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**D18.7.1 Shop Tests** **2** The wording "The procedures for these tests are to be deemed appropriate by the Society" specified in **18.7.1(1), Part D of the Rules** means those procedures in accordance with **Chapter 1, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part GF SHIPS USING LOW-FLASHPOINT FUELS** **GF1 GENERAL** **GF1.1 General** **GF1.1.3 Approval of Systems and Equipment, etc.** **1** The wording “to be approved as specified separately by the Society” specified in **1.1.3-1, Part GF of the Rules** means that an approval is to be obtained in accordance with **Annex 1.1.3-3, Part GF of the Rules**, Annexes **1** to **2A** and **Chapter 7, Part 5 of the Guidance for the Approval of Materials and Equipment for Marine Use.**	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part GF SHIPS USING LOW-FLASHPOINT FUELS** **GF1 GENERAL** **GF1.1 General** **GF1.1.3 Approval of Systems and Equipment, etc.** **1** The wording “to be approved as specified separately by the Society” specified in **1.1.3-1, Part GF of the Rules** means that an approval is to be obtained in accordance with **Annex 1.1.3-3, Part GF of the Rules**, and Annexes **1** to **2A**.	In order to add "TYPE APPROVAL OF INSULATION MATERIALS USED IN CARGO CONTAINMENT SYSTEMS FOR LIQUEFIED GASES" to Chapter 7, Part 5 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use, the current requirement have been changed. (Transfer from Annex 1 of Part N and GF.)

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
GF6 FUEL CONTAINMENT SYSTEM **GF6.4 Liquefied Gas Fuel Containment** **GF6.4.13 Materials and Construction** **5** For the purpose of the requirements in **6.4.13-3(2)**, **Part GF of the Rules**, tests and inspection specified in the following **(1)** and **(2)** are to be carried out. (1) The insulation materials are to be approved in accordance with the **Chapter 7, Part 5 of the Guidance for the Approval of Materials and Equipment for Marine Use.** In the above, tests and inspection are to be conducted according to the procedures on the manufacture, storage, handling and product quality control established by the manufacturer. (2) (Omitted) **8** If the material, which has been approved according to the **Chapter 7, Part 5 of the Guidance for the Approval of Materials and Equipment for Marine Use**, satisfies the performance requirements and such performance is considered to serve the purpose, the tests referred to in the preceding **-6** may be omitted.	**GF6 FUEL CONTAINMENT SYSTEM** **GF6.4 Liquefied Gas Fuel Containment** **GF6.4.13 Materials and Construction** **5** For the purpose of the requirements in **6.4.13-3(2)**, **Part GF of the Rules**, tests and inspection specified in the following **(1)** and **(2)** are to be carried out. (1) The insulation materials are to be approved in accordance with the **Annex 1 "Guidance for Equipment and Fittings of Ships Using Low-flashpoint Fuels"**. In the above, tests and inspection are to be conducted according to the procedures on the manufacture, storage, handling and product quality control established by the manufacturer. (2) (Omitted) **8** If the material, which has been approved according to the **Annex 1 "Guidance for Equipment and Fittings of Ships Using Low-flashpoint Fuels"**, satisfies the performance requirements and such performance is considered to serve the purpose, the tests referred to in the preceding **-6** may be omitted.	In order to add "TYPE APPROVAL OF INSULATION MATERIALS USED IN CARGO CONTAINMENT SYSTEMS FOR LIQUEFIED GASES" to Chapter 7, Part 5 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use, the current requirement have been changed.(Transfer from Annex 1 of Part N and GF.) In order to add "TYPE APPROVAL OF INSULATION MATERIALS USED IN CARGO CONTAINMENT SYSTEMS FOR LIQUEFIED GASES" to Chapter 7, Part 5 of the Guidance for the

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
		Approval and Type Approval of Materials and Equipment for Marine Use, the current requirement have been changed.(Transfer from Annex 1 of Part N and GF.)
GF10 POWER GENERATION INCLUDING PROPULSION AND OTHER GAS CONSUMERS	**GF10 POWER GENERATION INCLUDING PROPULSION AND OTHER GAS CONSUMERS**	
GF10.3 Internal Combustion Engines of Piston Type	**GF10.3 Internal Combustion Engines of Piston Type**	
GF10.3.1 General **1** In applying **10.3.1-1, Part GF of the Rules**, explosion relief ventilation provided for exhaust gas manifolds composing exhaust systems are to be approved by the Society in accordance with **Chapter 13, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**GF10.3.1 General** **1** In applying **10.3.1-1, Part GF of the Rules**, explosion relief ventilation provided for exhaust gas manifolds composing exhaust systems are to be approved by the Society in accordance with **Chapter 6, Part 13 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval" Editorial correction

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Annex 1 GUIDANCE FOR EQUIPMENT AND FITTINGS OF SHIPS USING LOW-FLASHPOINT FUELS	**Annex 1 GUIDANCE FOR EQUIPMENT AND FITTINGS OF SHIPS USING LOW-FLASHPOINT FUELS**	
Chapter 2 FUEL VAPOUR COMPRESSORS	**Chapter 2 FUEL VAPOUR COMPRESSORS**	
2.6 Tests and Inspections	**2.6 Tests and Inspections**	
2.6.1 Type Tests	**2.6.1 Type Tests**	
1 Each size and type of gas compressor is to be subjected type tests in the presence of a Society surveyor and type approved in accordance with **Chapter 2, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**1** Each size and type of gas compressor is to be subjected type tests in the presence of a Society surveyor and approved for use in accordance with **Chapter 2, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval" Terminology alignment
Chapter 3 FUEL PUMPS	**Chapter 3 FUEL PUMPS**	
3.6 Tests and Inspections	**3.6 Tests and Inspections**	
3.6.1 Type Tests	**3.6.1 Type Tests**	
1 Each size and type of pump is to be subjected to type tests in the presence of a Society surveyor and type approved in accordance with **Chapter 2, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**1** Each size and type of pump is to be subjected to type tests in the presence of a Society surveyor and approved for use in accordance with **Chapter 2, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval" Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Chapter 5 VALVES	**Chapter 5 VALVES**	
5.3 Tests and Inspections	**5.3 Tests and Inspections**	
5.3.1 Type Tests **1** Valves whose design temperatures are below −55°C are to be subjected to the tests and inspections specified in **(1)** to **(9)** below, taking into consideration **16.7.1, Part GF of the Rules** and type approved in accordance with **Chapter 2, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**. ((1) to (9) are omitted) **2** For valves not conforming to **5.2-2**, detailed data on construction and strength are to be submitted to the Society, and such valves are to be type approved in accordance with **Chapter 2, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**5.3.1 Type Tests** **1** Valves whose design temperatures are below −55°C are to be subjected to the tests and inspections specified in **(1)** to **(9)** below, taking into consideration **16.7.1, Part GF of the Rules** and approved for use in accordance with **Chapter 2, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. ((1) to (9) are omitted) **2** For valves not conforming to **5.2-2**, detailed data on construction and strength are to be submitted to the Society, and such valves are to be type approved in accordance with **Chapter 2, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval" Terminology alignment Changes due to the renaming of the "Guidance for the Approval"
Chapter 6 RELIEF VALVES	**Chapter 6 RELIEF VALVES**	
6.4 Tests and Inspections	**6.4 Tests and Inspections**	
6.4.1 Prototype Tests **1** Relief valves, not including those whose design temperatures are −55°C or higher, fitted to fuel piping and process piping, are to be subjected to prototype tests, and are	**6.4.1 Prototype Tests** **1** Relief valves, not including those whose design temperatures are −55°C or higher, fitted to fuel piping and process piping, are to be subjected to prototype tests, and are	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
to be type approved in accordance with **Chapter 2, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**. The tests are to verify that the relief valves possess necessary performance.	to be approved for use in accordance with **Chapter 2, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. The tests are to verify that the relief valves possess necessary performance.	Terminology alignment
Chapter 7 BELLOWS AND EXPANSION JOINTS (For Fuel Piping and Process Piping Systems)	**Chapter 7 BELLOWS AND EXPANSION JOINTS (For Fuel Piping and Process Piping Systems)**	
7.3 Tests and Inspections	**7.3 Tests and Inspections**	
7.3.1 Type Tests Bellows and expansion joints, not including those used for piping with open pipe ends and installed in fuel tanks, are to be subjected to the type tests specified in **16.7.2, Part GF of the Rules** for each type and are to be type approved in accordance with **Chapter 2, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**7.3.1 Type Tests** Bellows and expansion joints, not including those used for piping with open pipe ends and installed in fuel tanks, are to be subjected to the type tests specified in **16.7.2, Part GF of the Rules** for each type and are to be approved for use in accordance with **Chapter 2, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval" Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Chapter 9 LEVEL INDICATORS AND LEVEL ALARMS	**Chapter 9 LEVEL INDICATORS AND LEVEL ALARMS**	
9.1 General	**9.1 General**	
9.1.1 Application	**9.1.1 Application**	
1 Level gauges for measuring fuel liquid levels in fuel containment systems and process pressure vessels, and liquid levels in nitrogen tanks are to be in accordance with the requirements in **Chapter 4, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**1** Level gauges for measuring fuel liquid levels in fuel containment systems and process pressure vessels, and liquid levels in nitrogen tanks are to be in accordance with the requirements in **Chapter 4, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
2 Level alarm systems for detecting one or more of specific fuel liquid levels in fuel containment systems and process pressure vessels are to be in accordance with requirements in **Chapter 4, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use**: relevant requirements are to be applied mutatis mutandis.	**2** Level alarm systems for detecting one or more of specific fuel liquid levels in fuel containment systems and process pressure vessels are to be in accordance with requirements in **Chapter 4, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**: relevant requirements are to be applied mutatis mutandis.	Changes due to the renaming of the "Guidance for the Approval"
Chapter 10 PRESSURE GAUGES	**Chapter 10 PRESSURE GAUGES**	
10.5 Electrical Installations	**10.5 Electrical Installations**	
10.5.1 General	**10.5.1 General**	
2 Tests specified in **Chapter 1, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine**	**2** Tests specified in **Chapter 1, Part 7 of the Guidance for the Approval and Type Approval of Materials and**	Changes due to the renaming of the "Guidance for the

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Use are to be carried out mutatis mutandis and passed.	**Equipment for Marine Use** are to be carried out mutatis mutandis and passed.	Approval”
Chapter 11 TEMPERATURE INDICATING DEVICES	**Chapter 11 TEMPERATURE INDICATING DEVICES**	
11.4 Electrical Installations	**11.4 Electrical Installations**	
11.4.1 General **2** Tests specified in **Chapter 1, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use** are to be carried out mutatis mutandis and passed.	**11.4.1 General** **2** Tests specified in **Chapter 1, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** are to be carried out mutatis mutandis and passed.	Changes due to the renaming of the “Guidance for the Approval”
(Delete)	**Chapter 12 INSULATION MATERIALS** **(Chapter 12 text is omitted)**	In order to add "TYPE APPROVAL OF INSULATION MATERIALS USED IN CARGO CONTAINMENT SYSTEMS FOR LIQUEFIED GASES" to Chapter 7, Part 5 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use, the current requirement have been deleted.(Transfer from

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Chapter 13 INSULATION SYSTEM FOR VACUUM INSULATED TANKS **13.3 Materials, Construction and Strength** **13.3.1 Materials and Welding** **3** Elements of insulation systems which do not contribute to vacuums (such as supporting structures installed between inner vessels and outer shells, and layered insulation installed on inner vessels as countermeasure for heat radiation) are to be type approved in accordance with **Guidance for the Approval of Materials and Equipment for Marine Use**. Type approval for filler material such as pearlite, glass wool, etc. used between inner vessels and outer shells is not required except for cases where the Society deems it especially necessary.	**Chapter 13 INSULATION SYSTEM FOR VACUUM INSULATED TANKS** **13.3 Materials, Construction and Strength** **13.3.1 Materials and Welding** **3** Elements of insulation systems which do not contribute to vacuums (such as supporting structures installed between inner vessels and outer shells, and layered insulation installed on inner vessels as countermeasure for heat radiation) are to be type approved in accordance with **Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. Type approval for filler material such as pearlite, glass wool, etc. used between inner vessels and outer shells is not required except for cases where the Society deems it especially necessary.	Annex 1 of Part N and GF.) Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Chapter 14 OXYGEN CONTENT MEASURING EQUIPMENT	**Chapter 14 OXYGEN CONTENT MEASURING EQUIPMENT**	
14.4 Tests and Inspections	**14.4 Tests and Inspections**	
14.4.1 Approval Tests for Portable-type Oxygen Content Measuring Equipment	**14.4.1 Approval Tests**	Terminology alignment
14.4.2 Approval Tests for Fixed-type Oxygen Content Measuring Equipment	**14.4.2 Approval Tests for Use**	Terminology alignment
Chapter 20 FUEL HOSES	**Chapter 20 FUEL HOSES**	
20.5 Tests and Inspections	**20.5 Tests and Inspections**	
20.5.1 Type approval Tests **1** In principle, fuel hoses are to be subjected to the prototype tests in **-2** for each type and hose bore. In addition, fuel hose are to be type approved in accordance with **Chapter 2, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**20.5.1 Approval of Use Tests** **1** In principle, fuel hoses are to be subjected to the prototype tests in **-2** for each type and hose bore. In addition, fuel hose are to be approved for use in accordance with **Chapter 2, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Terminology alignment Changes due to the renaming of the "Guidance for the Approval" Terminology alignment
20.5.2 Product Inspections Hoses which have received type approval are to be subjected to the tests specified in the following **(1)** to **(3)**, and inspections are to be carried out in the presence of a Society	**20.5.2 Product Inspections** Hoses which have received Approval of Use are to be subjected to the tests specified in the following **(1)** to **(3)**, and inspections are to be carried out in the presence of a Society	Terminology alignment

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
surveyor before being shipped. ((1) to (3) are omitted.)	surveyor before being shipped. ((1) to (3) are omitted.)	

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part H ELECTRICAL INSTALLATIONS** **H1 GENERAL** **H1.2 Testing** **H1.2.1 Shop Tests** **5** The wording "to be subjected to type tests" in **1.2.1-4**, **Part H of the Rules** means **Part 8 of the Guidance for the Approval of Materials and Equipment for Marine Use**. Equipment and cables approved are made public in the **List of Approved Materials and Equipment**. **H2 ELECTRICAL INSTALLATIONS AND SYSTEM DESIGN** **H2.9 Cables** **H2.9.11 Precaution against Fire** **1** In cases where the installation work of cables in enclosed spaces or semi-enclosed spaces of ships meet either	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part H ELECTRICAL INSTALLATIONS** **H1 GENERAL** **H1.2 Testing** **H1.2.1 Shop Test** **5** The wording "to be subjected to type tests" in **1.2.1-4**, **Part H of the Rules** means **Part 8 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. Equipment and cables approved are made public in the **List of Approved Materials and Equipment**. **H2 ELECTRICAL INSTALLATIONS AND SYSTEM DESIGN** **H2.9 Cables** **H2.9.11 Precaution against Fire** **1** In cases where the installation work of cables in enclosed spaces or semi-enclosed spaces of ships meet either	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
of the following requirements, such work may be regarded as complying with the requirements given in **2.9.11-1, Part H of the Rules**. However, item **(2)(c)** below is to be approved by the Society in accordance with the requirements given in **Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use**. Furthermore, in cases where the use of cables is limited to specific applications, approval by the Society may be given on a case by case basis. ((1) and (2) are omitted.)	of the following requirements, such work may be regarded as complying with the requirements given in **2.9.11-1, Part H of the Rules**. However, item **(2)(c)** below is to be approved by the Society in accordance with the requirements given in **Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. Furthermore, in cases where the use of cables is limited to specific applications, approval by the Society may be given on a case by case basis. ((1) and (2) are omitted.)	Changes due to the renaming of the "Guidance for the Approval"
H2.9.14 Supports and Fixing of Cables **4** The wording "any tests otherwise specified by the Society" referred to in **2.9.14-3(4)(a), Part H of the Rules** are those tests specified in **3.4.2, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**H2.9.14 Supports and Fixing of Cables** **4** The wording "any tests otherwise specified by the Society" referred to in **2.9.14-3(4)(a), Part H of the Rules** are those tests specified in **3.4.2, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
5 The wording "those tests" referred to in **2.9.14-3(4)(f), Part H of the Rules** are those safe working load tests specified in **3.4.2(3), Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**5** The wording "those tests" referred to in **2.9.14-3(4)(f), Part H of the Rules** are those safe working load tests specified in **3.4.2(3), Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
H2.9.15 Penetration of Bulkheads and Decks **2** Cable penetrations through *A* class bulkheads or decks are to be approved by the Society in accordance with the requirements given in **Chapter 1, Part 5 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**H2.9.15 Penetration of Bulkheads and Decks** **2** Cable penetrations through *A* class bulkheads or decks are to be approved by the Society in accordance with the requirements given in **Chapter 1, Part 4 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval" Changes due to the reorganization of the "Guidance for the Approval"
5 Cable penetrations which are required to be watertight	**5** Cable penetrations which are required to be watertight	Changes due to the

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
may be verified, for example, in accordance any of the following **(1)** to **(3)**. (1) Confirmation as to whether watertightness is assured by a construction method in accordance with standards such as *JIS.* (2) The watertightness tests specified in item 10(1), **Table B2.7, Part B of the Rules.** (3) Approval in accordance with **Chapter 1, Part 5 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	may be verified, for example, in accordance any of the following **(1)** to **(3)**. (1) Confirmation as to whether watertightness is assured by a construction method in accordance with standards such as *JIS.* (2) The watertightness tests specified in item 10(1), **Table B2.7, Part B of the Rules.** (3) Approval in accordance with **Chapter 1, Part 4 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	renaming of the "Guidance for the Approval" Changes due to the reorganization of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part K MATERIALS** **K1 GENERAL** **K1.1 General** **K1.1.1 Application** **4** In the application of **1.1.1-3**, **Part K of the Rules for the Survey and Construction of Steel Ships**, those pipes made from metallic materials other than steels (for example titanium pipes, including primary material of pipes) are to be accordance with **Chapter 2**, **Part 2 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part K MATERIALS** **K1 GENERAL** **K1.1 General** **K1.1.1 Application** **4** In the application of **1.1.1-3**, **Part K of the Rules for the Survey and Construction of Steel Ships**, those pipes made from metallic materials other than steels (for example titanium pipes, including primary material of pipes) are to be accordance with **Chapter 2**, **Part 1 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval" Changes due to the reorganization of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
K2 TEST SPECIMENS AND MECHANICAL TESTING PROCEDURES	**K2 TEST SPECIMENS AND MECHANICAL TESTING PROCEDURES**	
K2.2 Test Specimens	**K2.2 Test Specimens**	
K2.2.1 Preparation of Test Specimens **1** "Where otherwise specified or agreed with the Surveyor" referred in **2.2.1-1, Part K of the Rules** means only where manufacturing process of the material has been already approved according to the requirements of **Part 2 of Guidance for the Approval of Materials and Equipment for Marine Use** by the Society.	**K2.2.1 Preparation of Test Specimens** **1** "Where otherwise specified or agreed with the Surveyor" referred in **2.2.1-1, Part K of the Rules** means only where manufacturing process of the material has been already approved according to the requirements of **Part 1 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** by the Society.	Changes due to the renaming of the "Guidance for the Approval" Changes due to the reorganization of the "Guidance for the Approval"
K3 ROLLED STEELS	**K3 ROLLED STEELS**	
K3.12 Additional Requirements for Brittle Crack Arrest Properties	**K3.12 Additional Requirements for Brittle Crack Arrest Properties**	
K3.12.3 Brittle Crack Arrest Properties etc. **4** In **3.12.3-3, Part K of the Rules**, "A brittle fracture test deemed appropriate by the Society" means a test with an evaluation procedure approved by the Society in accordance with **Annex 1.1** "Approval Scheme of Small-scale Test Methods for Brittle Crack Arrest Steels", **Guidance for the Approval of Materials and Equipment for Marine Use**.	**K3.12.3 Brittle Crack Arrest Properties etc.** **4** In **3.12.3-3, Part K of the Rules**, "A brittle fracture test deemed appropriate by the Society" means a test with an evaluation procedure approved by the Society in accordance with **Annex 1.1** "Approval Scheme of Small-scale Test Methods for Brittle Crack Arrest Steels", **Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
K5 CASTINGS **K5.1 Steel Castings** **K5.1.13 Additional Requirements for Crank Throws** The wording "the preliminary tests instructed by the Society" in **5.1.13-2, Part K of the Rules** means the tests in accordance with **Chapter 4, Part 2 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**K5 CASTINGS** **K5.1 Steel Castings** **K5.1.13 Additional Requirements for Crank Throws** The wording "the preliminary tests instructed by the Society" in **5.1.13-2, Part K of the Rules** means the tests in accordance with **Chapter 4, Part 1 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval" Changes due to the reorganization of the "Guidance for the Approval"
K6 STEEL FORGINGS **K6.1 Steel Forgings** **K6.1.13 Additional Requirements for Crankshafts** **4** The wording "the preliminary tests instructed by the Society" in **6.1.13-2** and **-3, Part K of the Rules** means the tests in accordance with **Chapter 3** and **Chapter 4, Part 2 of the Guidance for the Approval of Materials and Equipment for Marine Use** respectively.	**K6 STEEL FORGINGS** **K6.1 Steel Forgings** **K6.1.13 Additional Requirements for Crankshafts** **4** The wording "the preliminary tests instructed by the Society" in **6.1.13-2** and **-3, Part K of the Rules** means the tests in accordance with **Chapter 3** and **Chapter 4, Part 1 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** respectively.	Changes due to the renaming of the "Guidance for the Approval" Changes due to the reorganization of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Annex K1.1.1-3 GUIDANCE RELATING TO HIGH MANGANESE AUSTENITIC STEELS **1.1 High Manganese Austenitic Steels** **1.1.3 Approval** **1** High manganese austenitic steel plates, unless otherwise specially provided or deemed appropriate by the Society, are to be manufactured at steel works which have been approved by the Society. The suitability of steel plates for forming and welding are to be demonstrated during the initial approval test at the steelworks. Approval of the steelworks is to follow a scheme given in **Chapter 1, Part 2 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**Annex K1.1.1-3 GUIDANCE RELATING TO HIGH MANGANESE AUSTENITIC STEELS** **1.1 High Manganese Austenitic Steels** **1.1.3 Approval** **1** High manganese austenitic steel plates, unless otherwise specially provided or deemed appropriate by the Society, are to be manufactured at steel works which have been approved by the Society. The suitability of steel plates for forming and welding are to be demonstrated during the initial approval test at the steelworks. Approval of the steelworks is to follow a scheme given in **Chapter 1, Part 1 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval" Changes due to the reorganization of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part L EQUIPMENT** **L2 ANCHORS** **L2.2 Anchors Used for Positioning Systems** **L2.2.11 Holding Power Tests** **1** "Holding power tests designated by the Society" refers to the tests specified in **1.6.1(3), Part 3 of the "Guidance for the Approval of Materials and Equipment for Marine Use"**. For anchors intended to be used for vessels and floating offshore facilities fixed or positioned at specific sea areas for long periods of time, it means the tests specified in **1A.2.2(3)(b), Part 3 of the "Guidance for the Approval of Materials and Equipment for Marine Use"**.	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part L EQUIPMENT** **L2 ANCHORS** **L2.2 Anchors Used for Positioning Systems** **L2.2.11 Holding Power Tests** **1** "Holding power tests designated by the Society" refers to the tests specified in **1.6.1(3), Part 2 of the "Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use"**. For anchors intended to be used for vessels and floating offshore facilities fixed or positioned at specific sea areas for long periods of time, it means the tests specified in **1A.2.2(3)(b), Part 2 of the "Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use"**.	Changes due to the renaming of the "Guidance for the Approval" Changes due to the reorganization of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
L5 FIBRE ROPES	**L5 FIBRE ROPES**	
L5.1 Fibre Ropes	**L5.1 Fibre Ropes**	
L5.1.3 Processes of Manufacture Where the tests for the filaments specified in **Chapter 4, Part 3 of Guidance for the Approval of Materials and Equipment for Marine Use** as a part of the approval test of synthetic fibre rope are carried out by synthetic fibre rope manufacture and passed them, the filaments may be used for synthetic fibre rope.	**L5.1.3 Processes of Manufacture** Where the tests for the filaments specified in **Chapter 4, Part 2 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** as a part of the approval test of synthetic fibre rope are carried out by synthetic fibre rope manufacture and passed them, the filaments may be used for synthetic fibre rope.	Changes due to the renaming of the "Guidance for the Approval" Changes due to the reorganization of the "Guidance for the Approval"
L9 CONTAINER SECURING FITTINGS	**L9 CONTAINER SECURING FITTINGS**	
L9.1 Container Securing Fittings	**L9.1 Container Securing Fittings**	
L9.1.3 Materials The wording "special consideration" in **9.1.3-3, Part L of the Rules** means that impact tests are to be carried out in accordance with **12.4.4, Chapter 12, Part 3 of Guidance for the Approval of Materials and Equipment for Marine Use** to confirm notch toughness at the design temperature of the ship provided with the fittings at the time of "Society's approval" referred to in **9.1.5, Part L of the Rules**.	**L9.1.3 Materials** The wording "special consideration" in **9.1.3-3, Part L of the Rules** means that impact tests are to be carried out in accordance with **12.4.4, Chapter 12, Part 2 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** to confirm notch toughness at the design temperature of the ship provided with the fittings at the time of "Society's approval" referred to in **9.1.5, Part L of the Rules**.	Changes due to the renaming of the "Guidance for the Approval" Changes due to the reorganization of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
L9.1.5 Manufacturing Processes and Product Shapes The wording "Society's approval" in **9.1.5, Part L of the Rules** means obtaining approval in accordance with **Chapter 12, Part 3 of Guidance for the Approval of Materials and Equipment for Marine Use**.	**L9.1.5 Manufacturing Processes and Product Shapes** The wording "Society's approval" in **9.1.5, Part L of the Rules** means obtaining approval in accordance with **Chapter 12, Part 2 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval" Changes due to the reorganization of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part M WELDING** **M2 WELDING WORKS** **M2.4 Welding Process** **M2.4.1 Selection of Welding Consumables** **2** "It is deemed to be appropriate by the Society" specified in **2.4.1(2)(c)**, **Part M of the Rules** is, in principle, to be as provided below: (1) (Omitted) (2) The welding method is to be one pass horizontal fillet welding either by manual welding or gravity welding, and to have been type approved by the Society in accordance with the requirements in **M4.3.1**. (3) Type approval is to have been obtained form the Society for electrodes as being the non-low hydrogen electrodes for high tensile steel in accordance with the requirements in **M6.2.1**. (4) (Omitted)	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part M WELDING** **M2 WELDING WORKS** **M2.4 Welding Process** **M2.4.1 Selection of Welding Consumables** **2** "It is deemed to be appropriate by the Society" specified in **2.4.1(2)(c)**, **Part M of the Rules** is, in principle, to be as provided below: (1) (Omitted) (2) The welding method is to be one pass horizontal fillet welding either by manual welding or gravity welding, and to have been approved by the Society in accordance with the requirements in **M4.3.1**. (3) Approval is to have been obtained form the Society for electrodes as being the non-low hydrogen electrodes for high tensile steel in accordance with the requirements in **M6.2.1**. (4) (Omitted)	Terminology alignment

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Amended	Original	Remarks
M4 WELDING PROCEDURE AND RELATED SPECIFICATIONS	**M4 WELDING PROCEDURE AND RELATED SPECIFICATIONS**	
M4.3 Tests for Fillet Weld Joints	**M4.3 Tests for Fillet Weld Joints**	
M4.3.1 Application The fillet welding procedure qualification test using non-low hydrogen electrodes for high tensile steels is to be in accordance with the following requirements in addition to **4.3, in Part M of the Rules**. ((1) and (2) are omitted.) (3) Electrodes The electrodes are to have been type approved by the Society as the non-low hydrogen electrodes for high tensile steels in accordance with **M6.2.1**. ((4) and (5) are omitted.)	**M4.3.1 Application** The fillet welding procedure qualification test using non-low hydrogen electrodes for high tensile steels is to be in accordance with the following requirements in addition to **4.3, in Part M of the Rules**. ((1) and (2) are omitted.) (3) Electrodes The electrodes are to have been approved by the Society as the non-low hydrogen electrodes for high tensile steels in accordance with **M6.2.1**. ((4) and (5) are omitted.)	Terminology alignment
M6 WELDING CONSUMABLES	**M6 WELDING CONSUMABLES**	
M6.1 General	**M6.1 General**	
M6.1.3 Type Approval	**M6.1.3 Approval**	Terminology alignment

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Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part N SHIPS CARRYING LIQUEFIED GASES IN BULK** **N4 CARGO CONTAINMENT** **N4.19 Materials** **N4.19.3 Thermal Insulation and Other Materials Used in Cargo Containment Systems** **3** For the purpose of the requirements in **4.19.3-2, Part N of the Rules**, tests and inspection specified in the following **(1)** and **(2)** are to be carried out. (1) The insulation materials are to be approved in accordance with the **Chapter 7, Part 5 of the Guidance for the Approval of Materials and Equipment for Marine Use**. In the above, tests and inspection are to be conducted according to the procedures on the manufacture, storage, handling and product quality control established by the manufacturer. (2) (Omitted)	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part N SHIPS CARRYING LIQUEFIED GASES IN BULK** **N4 CARGO CONTAINMENT** **N4.19 Materials** **N4.19.3 Thermal Insulation and Other Materials Used in Cargo Containment Systems** **3** For the purpose of the requirements in **4.19.3-2, Part N of the Rules**, tests and inspection specified in the following **(1)** and **(2)** are to be carried out. (1) The insulation materials are to be approved in accordance with the **Annex 1** "GUIDANCE FOR EQUIPMENT AND FITTINGS OF SHIPS CARRYING LIQUEFIED GASES IN BULK". In the above, tests and inspection are to be conducted according to the procedures on the manufacture, storage, handling and product quality control established by the manufacturer. (2) (Omitted)	In order to add "TYPE APPROVAL OF INSULATION MATERIALS USED IN CARGO CONTAINMENT SYSTEMS FOR LIQUEFIED GASES" to Chapter 7, Part 5 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use, the current requirement have been changed.(Transfer from Annex 1 of Part N and

Amended	Original	Remarks
6 If the material, which has been approved according to the **Chapter 7, Part 5 of the Guidance for the Approval of Materials and Equipment for Marine Use**", satisfies the performance requirements and such performance is considered to serve the purpose, the tests referred to in the preceding **-4** may be omitted.	**6** If the material, which has been approved according to the **Annex 1 "GUIDANCE FOR EQUIPMENT AND FITTINGS OF SHIPS CARRYING LIQUEFIED GASES IN BULK**", satisfies the performance requirements and such performance is considered to serve the purpose, the tests referred to in the preceding **-4** may be omitted.	GF.) In order to add "TYPE APPROVAL OF INSULATION MATERIALS USED IN CARGO CONTAINMENT SYSTEMS FOR LIQUEFIED GASES" to Chapter 7, Part 5 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use, the current requirement have been changed.(Transfer from Annex 1 of Part N and GF.)
N5 PROCESS PRESSURE VESSELS AND LIQUID, VAPOUR, AND PRESSURE PIPING SYSTEMS	**N5 PROCESS PRESSURE VESSELS AND LIQUID, VAPOUR, AND PRESSURE PIPING SYSTEMS**	
N5.12 Materials	**N5.12 Materials**	
N5.12.1 Materials **1** For the purpose of **5.12.1, Part N of the Rules**, the materials used for piping, valves and fittings are to comply with the relevant requirements in **Chapter 6, Part N of the Rules**, and at the same time, to conform to the relevant requirements in **Part K of the Rules**. However, for materials	**N5.12.1 Materials** **1** For the purpose of **5.12.1, Part N of the Rules**, the materials used for piping, valves and fittings are to comply with the relevant requirements in **Chapter 6, Part N of the Rules**, and at the same time, to conform to the relevant requirements in **Part K of the Rules**. However, for materials	

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Amended	Original	Remarks
used for the piping specified in the following **(1)** to **(5)**, those conforming to *JIS* or other standards deemed appropriate by the Society may be used where they comply with the requirements in **Chapter 6, Part N of the Rules**. ((1) to (4) are omitted.) (5) Pipe joints of a butt welded type and pipe joints of a slip-on sleeve welded type (such as elbows, reducers, tees, bends and sockets, etc.) for which hot forming or heat treatment is carried out during their manufacturing process in accordance with the requirements in **D12.6.1(1)(a)ii), Part D of the Guidance** on the condition that they receive type approval from Society in accordance with **Chapter 12, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	used for the piping specified in the following **(1)** to **(5)**, those conforming to *JIS* or other standards deemed appropriate by the Society may be used where they comply with the requirements in **Chapter 6, Part N of the Rules**. ((1) to (4) are omitted.) (5) Pipe joints of a butt welded type and pipe joints of a slip-on sleeve welded type (such as elbows, reducers, tees, bends and sockets, etc.) for which hot forming or heat treatment is carried out during their manufacturing process in accordance with the requirements in **D12.6.1(1)(a)ii), Part D of the Guidance** on the condition that they receive approval of use from Society in accordance with **Chapter 12, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval" Terminology alignment
N13 INSTRUMENTATION AND AUTOMATION SYSTEMS	**N13 INSTRUMENTATION AND AUTOMATION SYSTEMS**	
N13.1 General	**N13.1 General**	
N13.1.3 Calibration and Test of Measuring Instruments For the purpose of the requirements in **13.1.3, Part N of the Rules**, tests and inspections of measuring instruments are to be in accordance with the following requirements **(1)** to **(3)**: (1) Tests and inspections of measuring instruments during manufacture of each are to conform to the following requirements **(a)** to **(c)**:	**N13.1.3 Calibration and Test of Measuring Instruments** For the purpose of the requirements in **13.1.3, Part N of the Rules**, tests and inspections of measuring instruments are to be in accordance with the following requirements **(1)** to **(3)**: (1) Tests and inspections of measuring instruments during manufacture of each are to conform to the following requirements **(a)** to **(c)**:	Changes due to the

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
(a) (Omitted) (b) Level gauges are to be in accordance with the requirements in the **Chapter 4, Part 7 of Guidance for the Approval of Materials and Equipment for Marine Use**. (c) (Omitted) ((2) and (3) are omitted.)	(a) (Omitted) (b) Level gauges are to be in accordance with the requirements in the **Chapter 4, Part 7 of Guidance for the Approval <u>and Type Approval</u> of Materials and Equipment for Marine Use**. (c) (Omitted) ((2) and (3) are omitted.)	renaming of the "Guidance for the Approval"
N13.2 Level Indicators for Cargo Tanks	**N13.2 Level Indicators for Cargo Tanks**	
N13.2.1 General For the purpose of the requirements **13.2.1, Part N of the Rules**, the following requirements **(1)** and **(2)** are to be complied with: (1) The performance and construction of level gauges are to be approved by the **Guidance for the Approval of Materials and Equipment for Marine Use**. (2) (Omitted)	**N13.2.1 General** For the purpose of the requirements **13.2.1, Part N of the Rules**, the following requirements **(1)** and **(2)** are to be complied with: (1) The performance and construction of level gauges are to be approved by the **Guidance for the Approval <u>and Type Approval</u> of Materials and Equipment for Marine Use**. (2) (Omitted)	Changes due to the renaming of the "Guidance for the Approval"
N16 USE OF CARGO AS FUEL	**N16 USE OF CARGO AS FUEL**	
N16.1 General	**N16.1 General**	
N16.1.1 General **3** In applying **16.1.1, Part N of the Rules, Annex 16.1.1-3, Part N of the Rules** is to be dealt with as follows:	**N16.1.1 General** **3** In applying **16.1.1, Part N of the Rules, Annex 16.1.1-3, Part N of the Rules** is to be dealt with as follows:	

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Amended	Original	Remarks
(1) The wording "specified separately by the Society" specified in **1.1-5, Annex 16.1.1-3, Part N of the Rules** refers to **8.3(4)(i), Chapter 8, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	(1) The wording "specified separately by the Society" specified in **1.1-5, Annex 16.1.1-3, Part N of the Rules** refers to **8.3(4)(i), Chapter 8, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
(2) The wording "specified separately by the Society" specified in **3.1.1-2, Annex 16.1.1-3, Part N of the Rules** refers to **Chapter 2** to **Chapter 4 of Annex 1**.	(2) The wording "specified separately by the Society" specified in **3.1.1-2, Annex 16.1.1-3, Part N of the Rules** refers to **Chapter 2** to **Chapter 4 of Annex 1**.	
(3) The wording "deemed appropriate by the Society" specified in **4.1-9, Annex 16.1.1-3, Part N of the Rules** refers to **8.3, Chapter 8, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	(3) The wording "deemed appropriate by the Society" specified in **4.1-9, Annex 16.1.1-3, Part N of the Rules** refers to **8.3, Chapter 8, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
(4) The wording "specified separately by the Society" specified in **4.3(1), Annex 16.1.1-3, Part N of the Rules** refers to **2.4.2 of Annex 1**.	(4) The wording "specified separately by the Society" specified in **4.3(1), Annex 16.1.1-3, Part N of the Rules** refers to **2.4.2 of Annex 1**.	
(5) The wording "specified separately by the Society" specified in **4.3(2), Annex 16.1.1-3, Part N of the Rules** refers to **2.4.3 of Annex 1**.	(5) The wording "specified separately by the Society" specified in **4.3(2), Annex 16.1.1-3, Part N of the Rules** refers to **2.4.3 of Annex 1**.	
N16.3 Arrangement of Spaces Containing Gas Consumers	**N16.3 Arrangement of Spaces Containing Gas Consumers**	
N16.3.4 Vents and Bleed Lines The "flame screen" specified in **16.3.4, Part N of the Rules** is to be a type approved in accordance with the provisions of **Chapter 7, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**.	**N16.3.4 Vents and Bleed Lines** The "flame screen" specified in **16.3.4, Part N of the Rules** is to be a type approved in accordance with the provisions of **Chapter 7, Part 6 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
N16.5 Gas Fuel Plants and Related Storage Tanks	**N16.5 Gas Fuel Plants and Related Storage Tanks**	
N16.5.3 Heating and Cooling Mediums The wording "flame screen of an approved type" specified in **16.5.3, Part N of the Rules** refers to ones approved in accordance with the provisions of **Chapter 7, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**.	**N16.5.3 Heating and Cooling Mediums** The wording "flame screen of an approved type" specified in **16.5.3, Part N of the Rules** refers to ones approved in accordance with the provisions of **Chapter 7, Part 6 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
N16.7 Special Requirements for Gas-fired Internal Combustion Engines	**N16.7 Special Requirements for Gas-fired Internal Combustion Engines**	
N16.7.1 Arrangements **2** A suitable pressure relief system is to be provided for air inlet manifolds, scavenge spaces and exhaust systems which are not designed to accommodate the worst-case overpressure due to ignited gas leaks or justified by the safety concept of the engine. Pressure relief systems provided for air inlet manifolds, scavenge spaces and for exhaust gas manifolds composing exhaust systems are to be approved by the Society in accordance with **Chapter 13, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**. A detailed evaluation regarding the hazard potential of overpressure in air inlet manifolds, scavenge spaces and exhaust systems is to be carried out and reflected in the safety concept of the engine. In the case of crankcases, explosion relief valves, as required in **2.4.3, Part D of the Rules**, are considered suitable for the gas operation of the engine. For engines not covered by **2.4.3, Part D of the Rules**,	**N16.7.1 Arrangements** **2** A suitable pressure relief system is to be provided for air inlet manifolds, scavenge spaces and exhaust systems which are not designed to accommodate the worst-case overpressure due to ignited gas leaks or justified by the safety concept of the engine. Pressure relief systems provided for air inlet manifolds, scavenge spaces and for exhaust gas manifolds composing exhaust systems are to be approved by the Society in accordance with **Chapter 13, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. A detailed evaluation regarding the hazard potential of overpressure in air inlet manifolds, scavenge spaces and exhaust systems is to be carried out and reflected in the safety concept of the engine. In the case of crankcases, explosion relief valves, as required in **2.4.3, Part D of the Rules**, are considered suitable for the gas operation of the engine. For engines not covered by **2.4.3,**	Changes due to the renaming of the "Guidance for the Approval"

Amended	Original	Remarks
a detailed evaluation regarding the hazard potential of fuel gas accumulation in the crankcase is to be carried out.	**Part D of the Rules**, a detailed evaluation regarding the hazard potential of fuel gas accumulation in the crankcase is to be carried out.	
Annex 1 GUIDANCE FOR EQUIPMENT AND FITTINGS OF SHIPS CARRYING LIQUEFIED GASES IN BULK	**Annex 1 GUIDANCE FOR EQUIPMENT AND FITTINGS OF SHIPS CARRYING LIQUEFIED GASES IN BULK**	
Chapter 2 CARGO COMPRESSORS	**Chapter 2 CARGO COMPRESSORS**	
2.6 Tests and Inspections	**2.6 Tests and Inspections**	
2.6.1 Type Tests **1** Each size and type of gas compressor is to be subjected type tests in the presence of a Society surveyor and type approved in accordance with **Chapter 2, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**2.6.1 Type Tests** **1** Each size and type of gas compressor is to be subjected type tests in the presence of a Society surveyor and approved for use in accordance with **Chapter 2, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval" Terminology alignment
Chapter 3 CARGO PUMPS	**Chapter 3 CARGO PUMPS**	
3.6 Tests and Inspections	**3.6 Tests and Inspections**	
3.6.1 Type Tests **1** Each size and type of pump is to be subjected to type	**3.6.1 Type Tests** **1** Each size and type of pump is to be subjected to type	Changes due to the

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
tests in the presence of a Society surveyor and type approved in accordance with **Chapter 2, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	tests in the presence of a Society surveyor and approved for use in accordance with **Chapter 2, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	renaming of the "Guidance for the Approval" Terminology alignment
Chapter 5 VALVES	**Chapter 5 VALVES**	
5.3 Tests and Inspections	**5.3 Tests and Inspections**	
5.3.1 Type Test **1** Valves whose design temperatures are below −55°C are to be subjected to the tests and inspections specified in **(1)** to **(9)** below, taking into consideration **5.13.1-1, Part N of the Rules** and type approved in accordance with **Chapter 2, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**. ((1) to (9) are omitted.)	**5.3.1 Type Test** **1** Valves whose design temperatures are below −55°C are to be subjected to the tests and inspections specified in **(1)** to **(9)** below, taking into consideration **5.13.1-1, Part N of the Rules** and approved for use in accordance with **Chapter 2, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. ((1) to (9) are omitted.)	Changes due to the renaming of the "Guidance for the Approval" Terminology alignment
2 For valves not conforming to **5.2-2**, detailed data on construction and strength are to be submitted to the Society, and such valves are to be type approved in accordance with **Chapter 2, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**2** For valves not conforming to **5.2-2**, detailed data on construction and strength are to be submitted to the Society, and such valves are to be type approved in accordance with **Chapter 2, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval" Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Chapter 6 RELIEF VALVES **6.4 Tests and Inspection** **6.4.1 Prototype Test** **1** Relief valves other than those fitted to cargo piping and process piping with a design temperature of -55°C or above are to be subjected to prototype tests to verify that they are possess the necessary performance and are to be type approved in accordance with **Chapter 2, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**Chapter 6 RELIEF VALVES** **6.4 Tests and Inspection** **6.4.1 Prototype Test** **1** Relief valves other than those fitted to cargo piping and process piping with a design temperature of -55°C or above are to be subjected to prototype tests to verify that they are possess the necessary performance and are to be approved for use in accordance with **Chapter 2, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval" Terminology alignment
Chapter 7 EXPANSION JOINTS (For Cargo Piping and Process Piping Systems) **7.3 Tests and Inspections** **7.3.1 Type Test** Expansion joints, except for those provided in the piping with open pipe ends and installed in the cargo tanks, are to be subjected to the type test specified in **5.13.1-2, Part N of the Rules** for each type. In addition, such expansion joints are to be type approved in accordance with **Chapter 2, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**Chapter 7 EXPANSION JOINTS (For Cargo Piping and Process Piping Systems)** **7.3 Tests and Inspections** **7.3.1 Type Test** Expansion joints, except for those provided in the piping with open pipe ends and installed in the cargo tanks, are to be subjected to the type test specified in **5.13.1-2, Part N of the Rules** for each type. In addition, such expansion joints are to be approved for use in accordance with **Chapter 2, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval" Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Chapter 9 LEVEL INDICATORS AND LEVEL ALARMS	**Chapter 9 LEVEL INDICATORS AND LEVEL ALARMS**	
9.1 General	**9.1 General**	
9.1.1 Application	**9.1.1 Application**	
1 The level gauges to measure the liquid levels of the cargo in cargo containment system and process pressure vessels and levels in liquid nitrogen tank are to conform to the requirements in **Chapter 4, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**1** The level gauges to measure the liquid levels of the cargo in cargo containment system and process pressure vessels and levels in liquid nitrogen tank are to conform to the requirements in **Chapter 4, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
2 The level alarm system that detects one point or more of the specific cargo liquid level in cargo containment system and process pressure vessel is to conform to the requirements in **Chapter 4, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use** in a corresponding manner.	**2** The level alarm system that detects one point or more of the specific cargo liquid level in cargo containment system and process pressure vessel is to conform to the requirements in **Chapter 4, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** in a corresponding manner.	Changes due to the renaming of the "Guidance for the Approval"
Chapter 10 PRESSURE GAUGES	**Chapter 10 PRESSURE GAUGES**	
10.5 Electrical Installations	**10.5 Electrical Installations**	
10.5.1 General	**10.5.1 General**	
2 The electrical installations of pressure gauges are to be subjected to the tests corresponding to the Environmental Test in accordance with the requirements in **Chapter 1, Part 7 of**	**2** The electrical installations of pressure gauges are to be subjected to the tests corresponding to the Environmental Test in accordance with the requirements in **Chapter 1, Part 7 of**	Changes due to the renaming of the "Guidance for the Approval"

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(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
the Guidance for the Approval of Materials and Equipment for Marine Use and to pass the testing requirements.	**the Guidance for the Approval <u>and Type Approval</u> of Materials and Equipment for Marine Use** and to pass the testing requirements.	
Chapter 11 TEMPERATURE INDICATING DEVICES	**Chapter 11 TEMPERATURE INDICATING DEVICES**	
11.4 Electrical Installations	**11.4 Electrical Installations**	
11.4.1 General **2** The electrical installations of the temperature indicating devices are to be subjected to the environmental test specified in the requirements in **Chapter 1, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use** and to pass the testing requirements.	**11.4.1 General** **2** The electrical installations of the temperature indicating devices are to be subjected to the environmental test specified in the requirements in **Chapter 1, Part 7 of the Guidance for the Approval <u>and Type Approval</u> of Materials and Equipment for Marine Use** and to pass the testing requirements.	Changes due to the renaming of the "Guidance for the Approval"
<u>Chapter 12 (Deleted)</u>	**<u>Chapter 12 INSULATION MATERIALS</u>** <u>(Chapter 12 text is omitted.)</u>	In order to add "TYPE APPROVAL OF INSULATION MATERIALS USED IN CARGO CONTAINMENT SYSTEMS FOR LIQUEFIED GASES" to Chapter 7, Part 5 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
		Use, the current requirement have been deleted.(Transfer from Annex 1 of Part N and GF.)
Chapter 14 OXYGEN CONTENT MEASURING EQUIPMENT	**Chapter 14 OXYGEN CONTENT MEASURING EQUIPMENT**	
14.4 Tests and Inspection	**14.4 Tests and Inspection**	
14.4.1 Approval Tests for Portable-type Oxygen Content Measuring Equipment	**14.4.1 Approval Tests**	Terminology alignment
14.4.2 Approval Tests for Fixed-type Oxygen Content Measuring Equipment	**14.4.2 Approval Tests for Use**	Terminology alignment
Chapter 20 CARGO HOSES	**Chapter 20 CARGO HOSES**	
20.5 Tests and Inspection	**20.5 Tests and Inspection**	
20.5.1 Type approval Tests **1** In principle, cargo hoses are to be subjected to the prototype tests in **-2** for each type and hose bore and are to be type approved in accordance with **Chapter 2, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**20.5.1 Approval Test for Use** **1** In principle, cargo hoses are to be subjected to the prototype tests in **-2** for each type and hose bore and are to be approved for use in accordance with **Chapter 2, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval" Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
20.5.2 Product Inspection When the hoses type approved are shipped, each hose is to be subjected to the following tests and inspection **(1)** to **(3)** in the attendance of the Surveyor: ((1) to (3) are omitted.)	**20.5.2 Product Inspection** When the hoses approved for use are shipped, each hose is to be subjected to the following tests and inspection **(1)** to **(3)** in the attendance of the Surveyor: ((1) to (3) are omitted.)	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part S SHIPS CARRYING DANGEROUS CHEMICALS IN BULK** **S5 CARGO TRANSFER** **S5.4 Tests Requirements for Piping** **S5.4.1 Application**	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part S SHIPS CARRYING DANGEROUS CHEMICALS IN BULK** **S5 CARGO TRANSFER** **S5.4 Tests Requirements for Piping** **S5.4.1 Application**	
Table S5.4.1-2 Test Requirements for Piping (Table is omitted.) Note: (1) Materials complying with international or national standards such as *ISO*, *JIS*, etc. may be used for pipe joints of butt welded type and pipe joints of a slip-on sleeve welded type (such as elbows, reducers, tees, bends and sockets, etc.) for which hot forming or heat treatment is carried out during their manufacturing process in accordance with the requirements of **D12.6.1-1(1)(a)ii)** on the condition that they receive approval of use from the Society in accordance with **Chapter 12, Part 6 of the Guidance for the Approval ~~and Type Approval~~ of Materials and Equipment for Marine Use**.		Changes due to the renaming of the "Guidance for the Approval" Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
S13 INSTRUMENTATION	**S13 INSTRUMENTATION**	
S13.1 Gauging	**S13.1 Gauging**	
S13.1.1 Types of Gauging Devices **5** The performance and construction of liquid level indicator are to have been approved in accordance with the **Guidance for the Approval of Materials and Equipment for Marine Use**.	**S13.1.1 Types of Gauging Devices** **5** The performance and construction of liquid level indicator are to have been approved in accordance with the **Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
S15 SPECIAL REQUIREMENTS	**S15 SPECIAL REQUIREMENTS**	
S15.19 Overflow Control	**S15.19 Overflow Control**	
S15.19.6 Installation of High Level Alarm The level detecting devices used for high level alarm system and overflow control system are to be of type approved in accordance with the requirements of **Chapter 4, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use**. When modular units are provided in the control room or on bridge, level indicators and visible alarms independent from those **(a)**, **(b)** and **(c)** given in the preceding **S15.19.5** are to be provided. Such audible alarms are not intended to identify alarms and thus they may not necessarily be independent. Visible and audible alarms are to be provided also in the cargo areas. Visible alarms are to be provided at such locations readily recognizable also from shore side. In	**S15.19.6 Installation of High Level Alarm** The level detecting devices used for high level alarm system and overflow control system are to be of type approved in accordance with the requirements of **Chapter 4, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. When modular units are provided in the control room or on bridge, level indicators and visible alarms independent from those **(a)**, **(b)** and **(c)** given in the preceding **S15.19.5** are to be provided. Such audible alarms are not intended to identify alarms and thus they may not necessarily be independent. Visible and audible alarms are to be provided also in the cargo areas. Visible alarms are to be provided at such locations readily	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
case where no control room is provided, audible and visible alarms are to be provided in the cargo control room. Except for entering the cargo tanks which have thoroughly been washed clean, the testing device for detecting ends is to be provided outside the tank. Simulation test of electric circuit or self-monitoring circuit may be accepted.	recognizable also from shore side. In case where no control room is provided, audible and visible alarms are to be provided in the cargo control room. Except for entering the cargo tanks which have thoroughly been washed clean, the testing device for detecting ends is to be provided outside the tank. Simulation test of electric circuit or self-monitoring circuit may be accepted.	

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part P MOBILE OFFSHORE DRILLING UNITS AND SPECIAL PURPOSE BARGES** **P10 POSITIONING SYSTEMS** **P10.7 Dynamic Positioning Systems** **P10.7.1 General** **1** The DP-control systems and computer systems used for the Class 2 DPS and Class 3 DPS are to be approved by the Society in accordance with the requirements of **Chapter 1, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use**. **2** The DP-control systems and computer systems used for the Class 1 DPS, as a rule, are to be approved by the Society in accordance with the requirements of **Chapter 1, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use** as far as practicable.	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part P MOBILE OFFSHORE DRILLING UNITS AND SPECIAL PURPOSE BARGES** **P10 POSITIONING SYSTEMS** **P10.7 Dynamic Positioning Systems** **P10.7.1 General** **1** The DP-control systems and computer systems used for the Class 2 DPS and Class 3 DPS are to be approved by the Society in accordance with the requirements of **Chapter 1, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. **2** The DP-control systems and computer systems used for the Class 1 DPS, as a rule, are to be approved by the Society in accordance with the requirements of **Chapter 1, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** as far as practicable.	Changes due to the renaming of the "Guidance for the Approval" Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
P12 ELECTRICAL INSTALLATIONS **P12.1 General** **P12.1.3 Tests** **3** The wording "to be subject to type tests" in **12.1.3-3, Part P of the Rules** means **Part 8 of the "Guidance for the Approval of Materials and Equipment for Marine Use"**. Equipment and cables approved are made public on the "List of Approved Materials and Equipment".	**P12 ELECTRICAL INSTALLATIONS** **P12.1 General** **P12.1.3 Tests** **3** The wording "to be subject to type tests" in **12.1.3-3, Part P of the Rules** means **Part 8 of the "Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use"**. Equipment and cables approved are made public on the "List of Approved Materials and Equipment".	Changes due to the renaming of the "Guidance for the Approval"

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(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part PS FLOATING OFFSHORE FACILITIES FOR CRUDE OIL/PETROLEUM GAS PRODUCTION, STORAGE AND OFFLOADING** **PS8 ELECTRICAL INSTALLATIONS** **PS8.1 General** **PS8.1.3 Tests** **2** The wording "to be subject to type tests" in **8.1.3-3, Part PS of the Rules** means **Part 8 of the Guidance for the Approval of Materials and Equipment for Marine Use**. Equipment and cables approved for use are made public on the "List of Approved Materials and Equipment".	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part PS FLOATING OFFSHORE FACILITIES FOR CRUDE OIL/PETROLEUM GAS PRODUCTION, STORAGE AND OFFLOADING** **PS8 ELECTRICAL INSTALLATIONS** **PS8.1 General** **PS8.1.3 Tests** **2** The wording "to be subject to type tests" in **8.1.3-3, Part PS of the Rules** means **Part 8 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. Equipment and cables approved for use are made public on the "List of Approved Materials and Equipment".	Changes due to the renaming of the "Guidance for the Approval"

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Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part R FIRE PROTECTION, DETECTION AND EXTINCTION** **R3 DEFINITIONS** **R3.1 General** **R3.1.1 General Rules** In respect of fire protection materials specified in **Part R of the Rules**, the wording "approved by the Society in accordance with the Fire Test Procedures Code" means those complied with the test standards specified in **Chapter 1, Part 5 of GUIDANCE FOR THE APPROVAL OF MATERIALS AND EQUIPMENT FOR MARINE USE** and approved by the Society. **R3.2 Definitions** **R3.2.2 "*A*" Class Divisions** The materials, details and arrangements of "*A*" *class divisions* and the means of affixing the insulation used on board ships are to be consistent with the detail drawings	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part R FIRE PROTECTION, DETECTION AND EXTINCTION** **R3 DEFINITIONS** **R3.1 General** **R3.1.1 General Rules** In respect of fire protection materials specified in **Part R of the Rules**, the wording "approved by the Society in accordance with the Fire Test Procedures Code" means those complied with the test standards specified in **Chapter 1, Part 4 of GUIDANCE FOR THE APPROVAL AND TYPE APPROVAL OF MATERIALS AND EQUIPMENT FOR MARINE USE** and approved by the Society. **R3.2 Definitions** **R3.2.2 "*A*" Class Divisions** The materials, details and arrangements of "*A*" *class divisions* and the means of affixing the insulation used on board ships are to be consistent with the detail drawings	Changes due to the renaming of the "Guidance for the Approval" Changes due to the reorganization of the "Guidance for the Approval" Terminology alignment

Amended	Original	Remarks
referred to on the Type Apprval Certificate for Fire Protection Material.	referred to on the Certificate of Approval for Fire Protection Material.	
R4 PROBABILITY OF IGNITION	**R4 PROBABILITY OF IGNITION**	
R4.2 Arrangements for Oil Fuel, Lubrication Oil and Other Flammable Oils	**R4.2 Arrangements for Oil Fuel, Lubrication Oil and Other Flammable Oils**	
R4.2.2 Arrangements for Oil Fuel **9** The wording "the approved ones by the Society" in **4.2.2(3)(e)ii), Part R of the Rules** means the oil level gauges approved in accordance with the requirements of **Chapter 4, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use** and the wording "the standard deemed approved by the Society" means the *JIS F* 7215 "Flat glass oil level gauges" or equivalent.	**R4.2.2 Arrangements for Oil Fuel** **9** The wording "the approved ones by the Society" in **4.2.2(3)(e)ii), Part R of the Rules** means the oil level gauges approved in accordance with the requirements of **Chapter 4, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** and the wording "the standard deemed approved by the Society" means the *JIS F* 7215 "Flat glass oil level gauges" or equivalent.	Changes due to the renaming of the "Guidance for the Approval"
R4.5 Cargo Areas of Tankers	**R4.5 Cargo Areas of Tankers**	
R4.5.3 Cargo Tank Venting **3** The design, arrangement, etc. of devices to prevent the passage of flame (hereinafter referred to as the devices in **R4.5.3**) specified in **4.5.3-3, Part R of the Rules** are to comply with the following requirements. (1) Terms used in this Chapter are defined as follows. (a) A device to prevent the passage of flame is a	**R4.5.3 Cargo Tank Venting** **3** The design, arrangement, etc. of devices to prevent the passage of flame (hereinafter referred to as the devices in **R4.5.3**) specified in **4.5.3-3, Part R of the Rules** are to comply with the following requirements. (1) Terms used in this Chapter are defined as follows. (a) A device to prevent the passage of flame is a	

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
device to prevent the passage of flame through the venting system into the cargo tanks, and includes a flame screen, a flame arrester, a detonation flame arrester and a high velocity device. Such devices are to be of approved type in accordance with the provisions of **Chapter 7, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**, or those deemed as equivalent by the Society. ((b) to (g) are omitted.) ((2) to (6) are omitted.)	device to prevent the passage of flame through the venting system into the cargo tanks, and includes a flame screen, a flame arrester, a detonation flame arrester and a high velocity device. Such devices are to be of approved type in accordance with the provisions of **Chapter 7, Part 6 of Guidance for the Approval <u>and Type Approval</u> of Materials and Equipment for Marine Use**, or those deemed as equivalent by the Society. ((b) to (g) are omitted.) ((2) to (6) are omitted.)	Changes due to the renaming of the "Guidance for the Approval"
R11 STRUCTURAL INTEGRITY	**R11 STRUCTURAL INTEGRITY**	
R11.6 Protection of Cargo Tank Structure against Pressure or Vacuum	**R11.6 Protection of Cargo Tank Structure against Pressure or Vacuum**	
R11.6.1 General The performance, installation procedures, etc. of pressure/vacuum valves (hereinafter referred to as "*PV* valves") specified in **11.6.1(1), Part R of the Rules** are to comply with the following requirements. The wording "the procedure deemed appropriate by the Society" in **11.6.1(1), Part R of the Rules** means the procedure specified in **Chapter 7, Part 6 of "Guidance for the Approval of Materials and Equipment for Marine Use"**. Approved *PV* valves are made public on "**List of approved materials and equipment**".	**R11.6.1 General** The performance, installation procedures, etc. of pressure/vacuum valves (hereinafter referred to as "*PV* valves") specified in **11.6.1(1), Part R of the Rules** are to comply with the following requirements. The wording "the procedure deemed appropriate by the Society" in **11.6.1(1), Part R of the Rules** means the procedure specified in **Chapter 7, Part 6 of "Guidance for the Approval <u>and Type Approval</u> of Materials and Equipment for Marine Use"**. Approved *PV* valves are made public on "**List of approved materials and equipment**".	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
((1) to (3) are omitted.)	((1) to (3) are omitted.)	
R11.6.3 Safety Measures in Cargo Tanks	**R11.6.3 Safety Measures in Cargo Tanks**	
1 The design, arrangement, etc. of high level alarms and level detecting devices of an overflow control system specified in **11.6.3-1, Part R of the Rules** are to comply with the following requirements. The wording "procedure deemed appropriate by the Society" in **11.6.3-1, Part R of the Rules** means the procedure specified in **Chapter 7, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**. Approved high level alarms and level detecting devices are made public on "**List of approved materials and equipment**".	**1** The design, arrangement, etc. of high level alarms and level detecting devices of an overflow control system specified in **11.6.3-1, Part R of the Rules** are to comply with the following requirements. The wording "procedure deemed appropriate by the Society" in **11.6.3-1, Part R of the Rules** means the procedure specified in **Chapter 7, Part 6 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. Approved high level alarms and level detecting devices are made public on "**List of approved materials and equipment**".	Changes due to the renaming of the "Guidance for the Approval"
((1) and (2) are omitted.)	((1) and (2) are omitted.)	
3 "A secondary means of allowing full flow relief of vapour, air or inert gas mixtures" specified in **11.6.3-2, Part R of the Rules** is to comply with the following requirements:	**3** "A secondary means of allowing full flow relief of vapour, air or inert gas mixtures" specified in **11.6.3-2, Part R of the Rules** is to comply with the following requirements:	
(1) The venting arrangements specified in **11.6.1(2), Part R of the Rules**, the rupture disks or the pressure-vacuum breaking devices may be used as a secondary means. The rupture disk is to be of a type approved by the Society in accordance with the provisions of **Chapter 7, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**.	(1) The venting arrangements specified in **11.6.1(2), Part R of the Rules**, the rupture disks or the pressure-vacuum breaking devices may be used as a secondary means. The rupture disk is to be of a type approved by the Society in accordance with the provisions of **Chapter 7, Part 6 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
((2) and (3) are omitted.)	((2) and (3) are omitted.)	
4 The pressure monitoring system specified in **11.6.3-2, Part R of the Rules** is to comply with the following requirements in addition to the requirements specified in **11.6.3-2, Part R of the Rules**:	**4** The pressure monitoring system specified in **11.6.3-2, Part R of the Rules** is to comply with the following requirements in addition to the requirements specified in **11.6.3-2, Part R of the Rules**:	Changes due to the renaming of the "Guidance for the Approval"
(1) The pressure monitoring system is to be of an	(1) The pressure monitoring system is to be of an	

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
approved type by the Society in accordance with the provisions of **Chapter 7, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**. ((2) to (7) are omitted.) **R21 SPECIAL REQUIREMENTS FOR SMALL SHIPS AND SHIPS FOR RESTRICTED SERVICE** **R21.2 Special Requirements** **R21.2.1 Requirements for Ships of less than 500 *Gross Tonnage*** **8** With respect to the provisions of **4.5.3-3, Part R of the Rules**, suitable wire gauze complying with the requirements in **7.4.2-2(3)(a)i)** through **ix)** and **(b)**, **Part 6 of GUIDANCE FOR THE APPROVAL OF MATERIALS AND EQUIPMENT FOR MARINE USE** and those in **D14.3.2-3(1)** may be substituted for the flame screen or flame arrester to be fitted at the openings specified in **R4.5.3-3(2)(a)**; and a flame screen or such wire gauze may be substituted for the flame arrester to be fitted at the openings specified in **R4.5.3-3(2)(b)**. Flame arresters required for openings specified in **R4.5.3-3(2)** may be of a type for which an endurance burning test is dispensed with. High velocity devices required for outlets specified in **R4.5.3-3(2)(b)** and **(c)** may be of a type for which a flash back test and an endurance burning test are dispensed with.	approved type by the Society in accordance with the provisions of **Chapter 7, Part 6 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. ((2) to (7) are omitted.) **R21 SPECIAL REQUIREMENTS FOR SMALL SHIPS AND SHIPS FOR RESTRICTED SERVICE** **R21.2 Special Requirements** **R21.2.1 Requirements for Ships of less than 500 *Gross Tonnage*** **8** With respect to the provisions of **4.5.3-3, Part R of the Rules**, suitable wire gauze complying with the requirements in **7.4.2-2(3)(a)i)** through **ix)** and **(b)**, **Part 6 of GUIDANCE FOR THE APPROVAL AND TYPE APPROVAL OF MATERIALS AND EQUIPMENT FOR MARINE USE** and those in **D14.3.2-3(1)** may be substituted for the flame screen or flame arrester to be fitted at the openings specified in **R4.5.3-3(2)(a)**; and a flame screen or such wire gauze may be substituted for the flame arrester to be fitted at the openings specified in **R4.5.3-3(2)(b)**. Flame arresters required for openings specified in **R4.5.3-3(2)** may be of a type for which an endurance burning test is dispensed with. High velocity devices required for outlets specified in **R4.5.3-3(2)(b)** and **(c)** may be of a type for which a flash back test and an endurance burning test are dispensed with.	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part X COMPUTER-BASED SYSTEMS** **X3 COMPUTER-BASED SYSTEMS** **X3.2 Approval of Systems and Components** **X3.2.1 System Certification** The wording "requirements specified otherwise by the Society" in **3.2.1-2, Part X of the Rules**, means confirmation of the following when assessments are carried out based on the **Rules for Approval of Manufacturers and Service Suppliers**. (1) The computer-based system in question is to acquire the type approval (including the approval of quality plan (and quality manual) specified in **2.2.1-1, Part X of the Rules**) specified in **3.2.2, Part X of the Rules.** Tests for approval of use may be carried out at the same time as an assessment based on the **Rules for Approval of Manufacturers and Service Suppliers**. (2) The manufacturers in question perform quality management based on the quality plan (and quality manual) specified in **2.2.1-1, Part X of the Rules**.	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part X COMPUTER-BASED SYSTEMS** **X3 COMPUTER-BASED SYSTEMS** **X3.2 Approval of Systems and Components** **X3.2.1 System Certification** The wording "requirements specified otherwise by the Society" in **3.2.1-2, Part X of the Rules**, means confirmation of the following when assessments are carried out based on the **Rules for Approval of Manufacturers and Service Suppliers**. (1) The computer-based system in question is to acquire the approval of use (including the approval of quality plan (and quality manual) specified in **2.2.1-1, Part X of the Rules**) specified in **3.2.2, Part X of the Rules.** Tests for approval of use may be carried out at the same time as an assessment based on the **Rules for Approval of Manufacturers and Service Suppliers**. (2) The manufacturers in question perform quality management based on the quality plan (and quality manual) specified in **2.2.1-1, Part X of the Rules**.	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
GUIDANCE FOR MARINE POLLUTION PREVENTION SYSTEMS	**GUIDANCE FOR MARINE POLLUTION PREVENTION SYSTEMS**	
Part 7 EQUIPMENT FOR THE PREVENTION OF POLLUTION BY SEWAGE	**Part 7 EQUIPMENT FOR THE PREVENTION OF POLLUTION BY SEWAGE**	
Chapter 2 EQUIPMENT FOR THE PREVENTION OF POLLUTION BY SEWAGE FROM SHIPS	**Chapter 2 EQUIPMENT FOR THE PREVENTION OF POLLUTION BY SEWAGE FROM SHIPS**	
2.2 Requirements for Installation of Equipment	**2.2 Requirements for Installation of Equipment**	
2.2.1 Equipment for the Prevention of Pollution by Sewage	**2.2.1 Equipment for the Prevention of Pollution by Sewage**	
1 The "sewage treatment plant as deemed appropriate by the Society" referred to in **2.2.1(1)(a)i), Part 7 of the Rules** means one that satisfies the following:	**1** The "sewage treatment plant as deemed appropriate by the Society" referred to in **2.2.1(1)(a)i), Part 7 of the Rules** means one that satisfies the following:	
(1) It complies with one of the following **(a)** to **(c)** in addition to either being approved by the Society in accordance with **Chapter 8, Part 3 of the Guidance for the Approval of Materials and Equipment for Marine Use** or having passed an inspection by an organization authorized by the Administration or deemed appropriate by the Society.	(1) It complies with one of the following **(a)** to **(c)** in addition to either being approved by the Society in accordance with **Chapter 8, Part 2 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** or having passed an inspection by an organization authorized by the Administration or deemed appropriate by the Society.	Changes due to the renaming of the "Guidance for the Approval"
((a) to (c) are omitted.)	((a) to (c) are omitted.)	
(2) (Omitted)	(2) (Omitted)	
2 The wording "sewage comminuting and disinfecting	**2** The wording "sewage comminuting and disinfecting	Changes due to the

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
system as deemed appropriate by the Society" referred to in **2.2.1(1)(a)ii), Part 7 of the Rules** means one that satisfies the following: (1) It is approved by the Society in accordance with **Chapter 8, Part 3 of the Guidance for the Approval of Materials and Equipment for Marine Use** or have passed an inspection by an organization authorized by the Administration or deemed appropriate by the Society. (2) (Omitted)	system as deemed appropriate by the Society" referred to in **2.2.1(1)(a)ii), Part 7 of the Rules** means one that satisfies the following: (1) It is approved by the Society in accordance with **Chapter 8, Part 2 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** or have passed an inspection by an organization authorized by the Administration or deemed appropriate by the Society. (2) (Omitted)	renaming of the "Guidance for the Approval"
6 The "sewage treatment plant as deemed appropriate by the Society" referred to in **2.2.1(1)(b)i), Part 7 of the Rules** means one that satisfies the following: (1) It complies with the requirements of *IMO Res.* MEPC.227(64) (including 4.2 of the Annex), as amended by *IMO Res.* MEPC.284(70), in addition to either being approved by the Society in accordance with **Chapter 8, Part 3 of the Guidance for the Approval of Materials and Equipment for Marine Use** or having passed an inspection by an organization authorized by the Administration or deemed appropriate by the Society. (2) (Omitted)	**6** The "sewage treatment plant as deemed appropriate by the Society" referred to in **2.2.1(1)(b)i), Part 7 of the Rules** means one that satisfies the following: (1) It complies with the requirements of *IMO Res.* MEPC.227(64) (including 4.2 of the Annex), as amended by *IMO Res.* MEPC.284(70), in addition to either being approved by the Society in accordance with **Chapter 8, Part 2 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** or having passed an inspection by an organization authorized by the Administration or deemed appropriate by the Society. (2) (Omitted)	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
GUIDANCE FOR SAFETY EQUIPMENT **Chapter 3 ARRANGEMENTS AND PERFORMANCE** **3.1 General** **3.1.1 General** **17** In cases where the Administration requires the fitting of fall preventer devices (FPDs), the following **(1)** to **(3)** are to be complied with. However, in cases where special instructions are required by the Administration, the requirements may be dispensed with. (1) (Omitted) (2) (Omitted) (3) Fall preventer devices are to be approved by the Society in accordance with **Chapter 7, Part 3 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**GUIDANCE FOR SAFETY EQUIPMENT** **Chapter 3 ARRANGEMENTS AND PERFORMANCE** **3.1 General** **3.1.1 General** **17** In cases where the Administration requires the fitting of fall preventer devices (FPDs), the following **(1)** to **(3)** are to be complied with. However, in cases where special instructions are required by the Administration, the requirements may be dispensed with. (1) (Omitted) (2) (Omitted) (3) Fall preventer devices are to be approved by the Society in accordance with **Chapter 7, Part 2 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval" Changes due to the reorganization of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
GUIDANCE FOR CARGO REFRIGERATING INSTALLATIONS **Chapter 3 REFRIGERATING MACHINERY** **3.1 General** **3.1.3 Materials and Welding** The wording "to be approved by the Society" specified to in **3.1.3-6 of the Rules** means that approval is to be made in accordance with the requirements in **Chapter 2** or **6**, **Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**GUIDANCE FOR CARGO REFRIGERATING INSTALLATIONS** **Chapter 3 REFRIGERATING MACHINERY** **3.1 General** **3.1.3 Materials and Welding** The wording "to be approved by the Society" specified to in **3.1.3-6 of the Rules** means that approval is to be made in accordance with the requirements in **Chapter 2** or **6**, **Part 6 of the Guidance for the Approval <u>and Type Approval</u> of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
GUIDANCE FOR PREVENTIVE MACHINERY MAINTENANCE SYSTEMS **Chapter 2 SURVEYS** **2.2 Registration Surveys** **2.2.2 Shop Tests** **2** Test procedures for environmental tests are to be in accordance with **Chapter 1, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**GUIDANCE FOR PREVENTIVE MACHINERY MAINTENANCE SYSTEMS** **Chapter 2 SURVEYS** **2.2 Registration Surveys** **2.2.2 Shop Tests** **2** Test procedures for environmental tests are to be in accordance with **Chapter 1, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
GUIDANCE FOR CENTRALIZED CARGO MONITORING AND CONTROL SYSTEMS **Chapter 2 SURVEYS** **2.2 Registration Surveys** **2.2.2 Shop Tests** **1** The wording "deemed appropriate by the Society" specified in **2.2.2 of the Rules** means devices satisfy the requirements specified in **Chapters 1 and 4, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**GUIDANCE FOR CENTRALIZED CARGO MONITORING AND CONTROL SYSTEMS** **Chapter 2 SURVEYS** **2.2 Registration Surveys** **2.2.2 Shop Tests** **1** The wording "deemed appropriate by the Society" specified in **2.2.2 of the Rules** means devices satisfy the requirements specified in **Chapters 1 and 4, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"

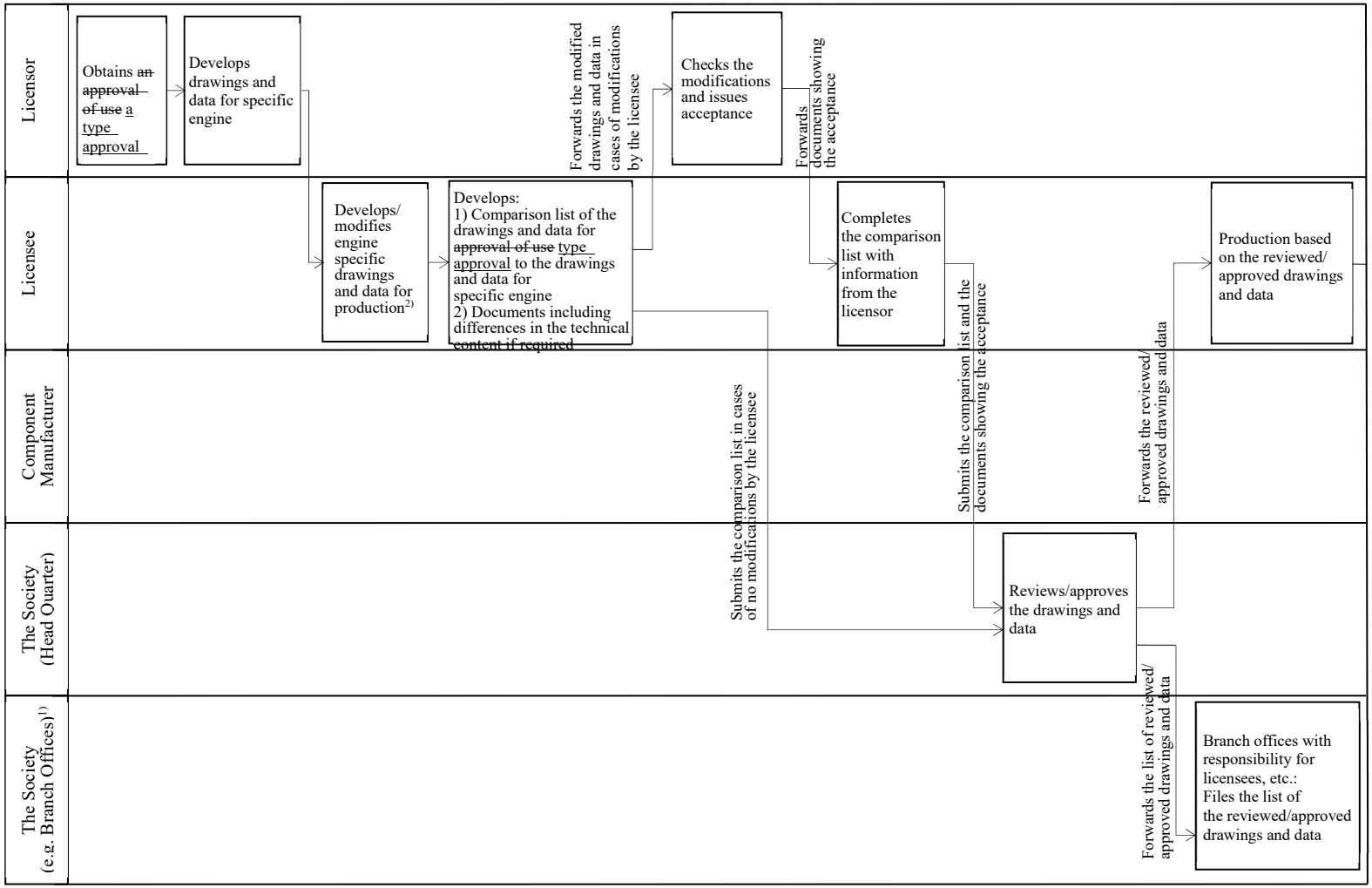
Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
GUIDANCE FOR HIGH SPEED CRAFT	**GUIDANCE FOR HIGH SPEED CRAFT**	
Part 9 MACHINERY INSTALLATIONS	**Part 9 MACHINERY INSTALLATIONS**	
Chapter 2 RECIPROCATING INTERNAL COMBUSTION ENGINES	**Chapter 2 RECIPROCATING INTERNAL COMBUSTION ENGINES**	
2.1 General	**2.1 General**	
2.1.1 General	**2.1.1 General**	
1 The wording "as specified separately by the Society" specified in **2.1.1-2, Part 9 of the Rules** means "in accordance with **Chapter 8, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**".	**1** The wording "as specified separately by the Society" specified in **2.1.1-2, Part 9 of the Rules** means "in accordance with **Chapter 8, Part 6 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**".	Changes due to the renaming of the "Guidance for the Approval"
2.1.4 Approval of Reciprocating Internal Combustion Engines	**2.1.4 Approval of Reciprocating Internal Combustion Engines**	
2 The phrase "design approval is to be obtained as specified separately by the Society" specified in **2.1.4-1(1)(a), Part 9 of the Rules** means that the design approval and design appraisal are to be obtained in accordance with **Chapter 8, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**.	**2** The phrase "design approval is to be obtained as specified separately by the Society" specified in **2.1.4-1(1)(a), Part 9 of the Rules** means that the design approval and design appraisal are to be obtained in accordance with **Chapter 8, Part 6 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
3 The wording "the drawings and data of the engine whose type approval has been obtained" specified in **(1)(c)**, **(1)(d)**, **(2)(a)** and **(2)(b)** of **2.1.4-1, Part 9 of the Rules** means	**3** The wording "the drawings and data of the engine whose approval of use has been obtained" specified in **(1)(c)**, **(1)(d)**, **(2)(a)** and **(2)(b)** of **2.1.4-1, Part 9 of the Rules** means	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

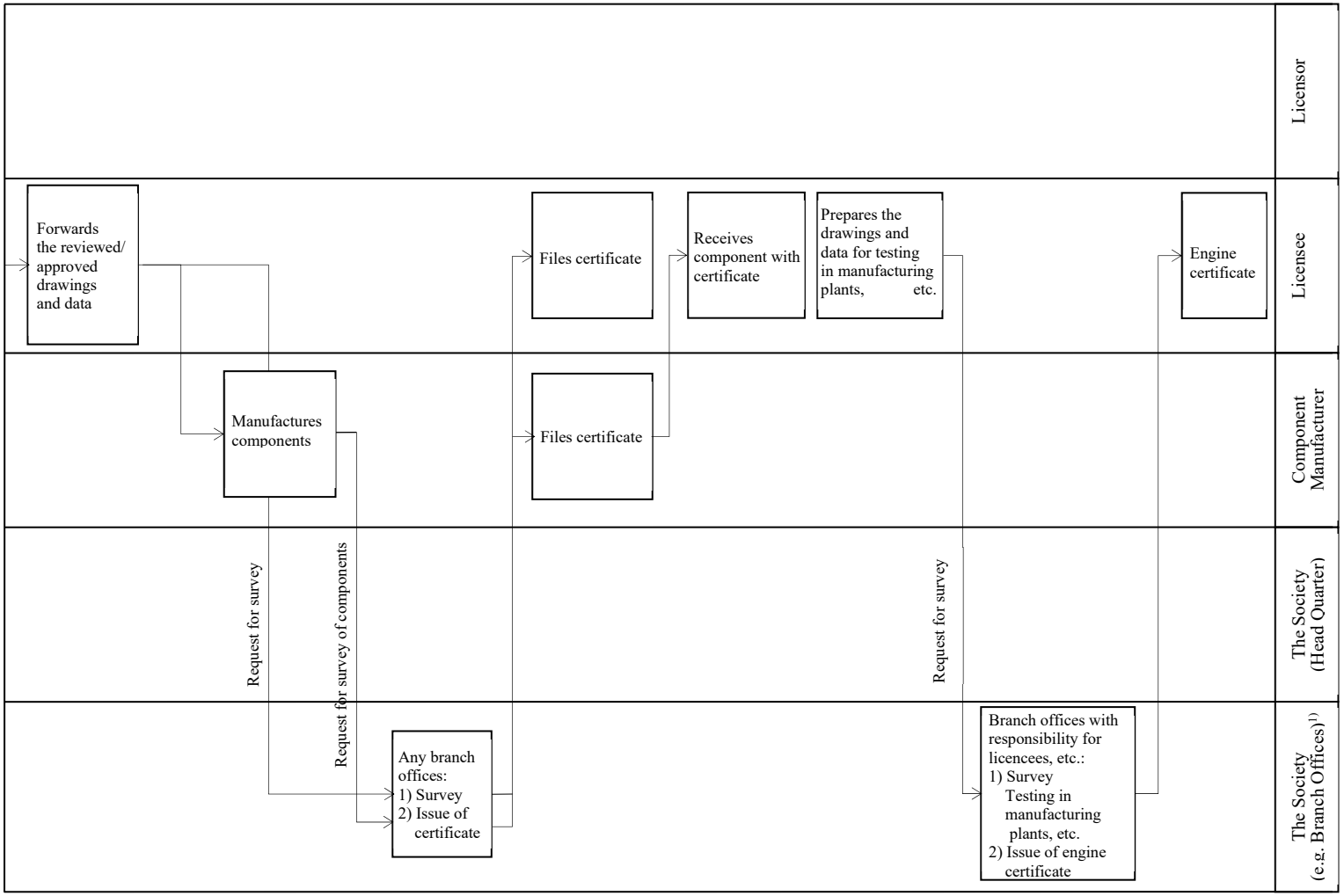
Amended	Original	Remarks
those listed in **8.2.2, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**.	those listed in **8.2.2, Part 6 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Terminology alignment
4 The wording "as specified separately by the Society" specified in **2.1.4-1(1)(d), Part 9 of the Rules** means "in accordance with **8.2.2-2, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**".	**4** The wording "as specified separately by the Society" specified in **2.1.4-1(1)(d), Part 9 of the Rules** means "in accordance with **8.2.2-2, Part 6 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**".	Changes due to the renaming of the "Guidance for the Approval"
6 The wording "as specified separately by the Society" specified in **2.1.4-1(4)(a), Part 9 of the Rules** means "in accordance with **8.2.2-4, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**".	**6** The wording "as specified separately by the Society" specified in **2.1.4-1(4)(a), Part 9 of the Rules** means "in accordance with **8.2.2-4, Part 6 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**".	Changes due to the renaming of the "Guidance for the Approval"
2.1.5 Construction, Installation and General	**2.1.5 Construction, Installation and General**	

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Fig.2.1.4-1 Flow of Approval of Reciprocating Internal Combustion Engines  1) Branch offices with responsibility for licensees and/or component manufacturers in different locations 2) In cases of modifications by the licensee, refer to **(b)** and **(c)** of **2.1.4-1(2), Part 9 of the Rules**		Terminology alignment

Amended	Original	Remarks

Fig.2.1.4-1 Flow of Approval of Reciprocating Internal Combustion Engines (continued)



Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Chapter 7 PIPES, VALVES PIPE FITTINGS AND AUXILIARIES	**Chapter 7 PIPES, VALVES PIPE FITTINGS AND AUXILIARIES**	
7.1 General	**7.1 General**	
7.1.2 Materials The wording "requirements specified otherwise" in **7.1.2, Part 9 of the Rules** means as follows. (1) In cases where rubber hoses, Teflon hoses or nylon hoses are used for the following pipes, only materials approved in accordance with the **Guidance for the Approval of Materials and Equipment for Marine Use** are to be used. (a) Pipes of Group I or Group II (b) Pipes likely to cause fire or flooding in case of their fracture (2) Only plastics pipes (including vinyl pipes) approved by the Society in accordance with **Chapter 6, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use** are to be used. ((3) and (4) are omitted.)	**7.1.2 Materials** The wording "requirements specified otherwise" in **7.1.2, Part 9 of the Rules** means as follows. (1) In cases where rubber hoses, Teflon hoses or nylon hoses are used for the following pipes, only materials approved in accordance with the **Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** are to be used. (a) Pipes of Group I or Group II (b) Pipes likely to cause fire or flooding in case of their fracture (2) Only plastics pipes (including vinyl pipes) approved by the Society in accordance with **Chapter 6, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** are to be used. ((3) and (4) are omitted.)	Changes due to the renaming of the "Guidance for the Approval" Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Part 10 ELECTRICAL INSTALLATIONS **Chapter 1 GENERAL** **1.2 Testing** **1.2.1 Shop Tests** **3** The wording "to be subjected to type test" in **1.2.1-3, Part 10 of the Rules** means **Part 8 of the Guidance for the Approval of Materials and Equipment for Marine Use**. Cables type tested are made public in the List of Approved Materials and Equipment.	**Part 10 ELECTRICAL INSTALLATIONS** **Chapter 1 GENERAL** **1.2 Testing** **1.2.1 Shop Tests** **3** The wording "to be subjected to type test" in **1.2.1-3, Part 10 of the Rules** means **Part 8 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. Cables type tested are made public in the List of Approved Materials and Equipment.	Changes due to the renaming of the "Guidance for the Approval"
Part 11 FIRE PROTECTION, DETECTION, EXTINCTION AND MEANS OF ESCAPE **Chapter 1 GENERAL** **1.2 Definitions** **1.2.1 Application** "Being ensured in accordance with the test procedures deemed as appropriate by the Society" specified in provisions	**Part 11 FIRE PROTECTION, DETECTION, EXTINCTION AND MEANS OF ESCAPE** **Chapter 1 GENERAL** **1.2 Definitions** **1.2.1 Application** "Being ensured in accordance with the test procedures deemed as appropriate by the Society" specified in provisions	Changes due to the renaming of the "Guidance for the

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
of **1.2, Part 11 of the Rules** means that materials are approved by the Society in accordance with the provisions specified in **Chapter 1, Part 5 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	of **1.2, Part 11 of the Rules** means that materials are approved by the Society in accordance with the provisions specified in **Chapter 1, Part 4 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Approval” Changes due to the reorganization of the “Guidance for the Approval”

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
GUIDANCE FOR PASSENGER SHIPS **Part 2 CLASS SURVEY** **Chapter 2 CLASSIFICATION SURVEYS** **2.1 Classification Survey during Construction** **2.1.8 Verification of Coating Application** **2** The "certificate deemed appropriate by the Society" stipulated in **2.1.8(1)**, **Part 2 of the Rules** refers to one of the following **(1)** to **(3)**: (1) The Society's approval certificate specified in **Chapter 4**, **Part 5** of **Guidance for the Approval of Materials and Equipment for Marine Use** (2) Statement of Compliance issued by the Research Institute of Marine Engineering, Japan (*RIME*), the Japan Paint Inspection and testing Association or MARINTEK (3) Other documents approved by the Society	**GUIDANCE FOR PASSENGER SHIPS** **Part 2 CLASS SURVEY** **Chapter 2 CLASSIFICATION SURVEYS** **2.1 Classification Survey during Construction** **2.1.8 Verification of Coating Application** **2** The "certificate deemed appropriate by the Society" stipulated in **2.1.8(1)**, **Part 2 of the Rules** refers to one of the following **(1)** to **(3)**: (1) The Society's approval certificate specified in **Chapter 4**, **Part 4** of **Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** (2) Statement of Compliance issued by the Research Institute of Marine Engineering, Japan (*RIME*), the Japan Paint Inspection and testing Association or MARINTEK (3) Other documents approved by the Society	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Part 3 HULL CONSTRUCTION AND EQUIPMENT **Chapter 6 WATERTIGHT BULKHEAD AND THE OPENING** **6.3 Openings of Watertight Bulkhead** **6.3.2 Pipes and Penetrations** **3** The application of **6.3.2-3**, **Part 3 of the Rules** is to comply with the following **(1)** to **(7)**. ((1) to (5) are omitted.) (6) Penetrations used for the passage of heat sensitive piping systems through watertight boundaries are to be tested with heat sensitive piping and are to be approved in accordance with the following **(a)** to **(j)**. (a) **Chapter 1, Part 5, Guidance for the Approval of Materials and Equipment for Marine Use** applies correspondingly to procedures for approval, tests, etc. for pipe penetrations. (b) Approval of the pipe penetrations is to be included a watertightness test which is carried out after completing fire test under provision of **Chapter 1** of **Part 5** of **the Guidance for the Approval of Materials and Equipment for Marine Use**. ((c) to (i) are omitted.)	**Part 3 HULL CONSTRUCTION AND EQUIPMENT** **Chapter 6 WATERTIGHT BULKHEAD AND THE OPENING** **6.3 Openings of Watertight Bulkhead** **6.3.2 Pipes and Penetrations** **3** The application of **6.3.2-3**, **Part 3 of the Rules** is to comply with the following **(1)** to **(7)**. ((1) to (5) are omitted.) (6) Penetrations used for the passage of heat sensitive piping systems through watertight boundaries are to be tested with heat sensitive piping and are to be approved in accordance with the following **(a)** to **(j)**. (a) **Chapter 1, Part 4, Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** applies correspondingly to procedures for approval, tests, etc. for pipe penetrations. (b) Approval of the pipe penetrations is to be included a watertightness test which is carried out after completing fire test under provision of **Chapter 1** of **Part 4** of **the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. ((c) to (i) are omitted.)	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
(7) (Omitted)	(7) (Omitted)	

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF INLAND WATERWAY SHIPS **Part 2 CLASS SURVEYS** **Chapter 8 PROPELLER SHAFT AND STERN TUBE SHAFT SURVEYS** **8.1 General** **8.1.2 Preventive Maintenance System of Shafts** **2** The wording "Remote monitoring devices for weardown of shaft deemed appropriate by the Society" in **8.1.2-2(7), Part 2 of the Rules** means devices approved by the Society in accordance with **Chapter 1, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF INLAND WATERWAY SHIPS** **Part 2 CLASS SURVEYS** **Chapter 8 PROPELLER SHAFT AND STERN TUBE SHAFT SURVEYS** **8.1 General** **8.1.2 Preventive Maintenance System of Shafts** **2** The wording "Remote monitoring devices for weardown of shaft deemed appropriate by the Society" in **8.1.2-2(7), Part 2 of the Rules** means devices approved by the Society in accordance with **Chapter 1, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Chapter 9 PLANNED MACHINERY SURVEYS	**Chapter 9 PLANNED MACHINERY SURVEYS**	
9.1 Planned Machinery Surveys	**9.1 Planned Machinery Surveys**	
9.1.3 Planned Machinery Maintenance Scheme (PMS)	**9.1.3 Planned Machinery Maintenance Scheme (PMS)**	
4 Approval of PMS Conditions for approval of PMS are as follows: ((1) to (4) are omitted.) (5) Computer Computers used for maintenance management system are to satisfy the following requirements specified in **(a)** through **(f)**: ((a) to (e) are omitted.) (f) It is recommended that the software is approved in accordance with **Chapter 1, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**.	**4** Approval of PMS Conditions for approval of PMS are as follows: ((1) to (4) are omitted.) (5) Computer Computers used for maintenance management system are to satisfy the following requirements specified in **(a)** through **(f)**: ((a) to (e) are omitted.) (f) It is recommended that the software is approved in accordance with **Annex 9.1.3, Part B of the Rules for the Survey and Construction of Steel Ships**.	In order to relocate "PROCEDURES FOR THE APPROVAL OF PMS/CBM MANAGEMENT SOFTWARE" to Chapter 1, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use, the current requirement is chenged.
9.1.4 Condition Based Maintenance Scheme (CBM)	**9.1.4 Condition Based Maintenance Scheme (CBM)**	
5 Approval of CBM Conditions for approval of CBM are as follows: (1) (Omitted) (2) Condition monitoring system The condition monitoring system is to satisfy the following requirements specified in **(a)** to **(g)**. In cases where this system is modified, that modification is to be approved by the Society. (a) (Omitted) (b) The software is to have condition monitoring	**5** Approval of CBM Conditions for approval of CBM are as follows: (1) (Omitted) (2) Condition monitoring system The condition monitoring system is to satisfy the following requirements specified in **(a)** to **(g)**. In cases where this system is modified, that modification is to be approved by the Society. (a) (Omitted) (b) The software is to have condition monitoring	In order to relocate "PROCEDURES FOR THE APPROVAL OF PMS/CBM MANAGEMENT SOFTWARE" to Chapter 1, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use, the

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
function specified in **Chapter 1, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use** and be suited to diagnosing any deterioration of machinery, equipment or associated components on the basis of the data from the sensors or centralized machinery monitoring and control systems specified in **(a)**. The software is to be suitable for diagnosing the condition of equipment or its components on the basis of independent or coalesced data, or their trends. ((c) to (g) are omitted.) (3) Maintenance management system The maintenance management system is to have the maintenance records function specified in **Chapter 1, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**. This function may be incorporated into the condition monitoring system specified in **(2)**. ((4) to (7) are omitted.)	function specified in **Annex 9.1.3, Part B of the Rules for the Survey and Construction of Steel Ships** and be suited to diagnosing any deterioration of machinery, equipment or associated components on the basis of the data from the sensors or centralized machinery monitoring and control systems specified in **(a)**. The software is to be suitable for diagnosing the condition of equipment or its components on the basis of independent or coalesced data, or their trends. ((c) to (g) are omitted.) (3) Maintenance management system The maintenance management system is to have the maintenance records function specified in **Annex 9.1.3, Part B of the Rules for the Survey and Construction of Steel Ships**. This function may be incorporated into the condition monitoring system specified in **(2)**. ((4) to (7) are omitted.)	current requirement is chenged.

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

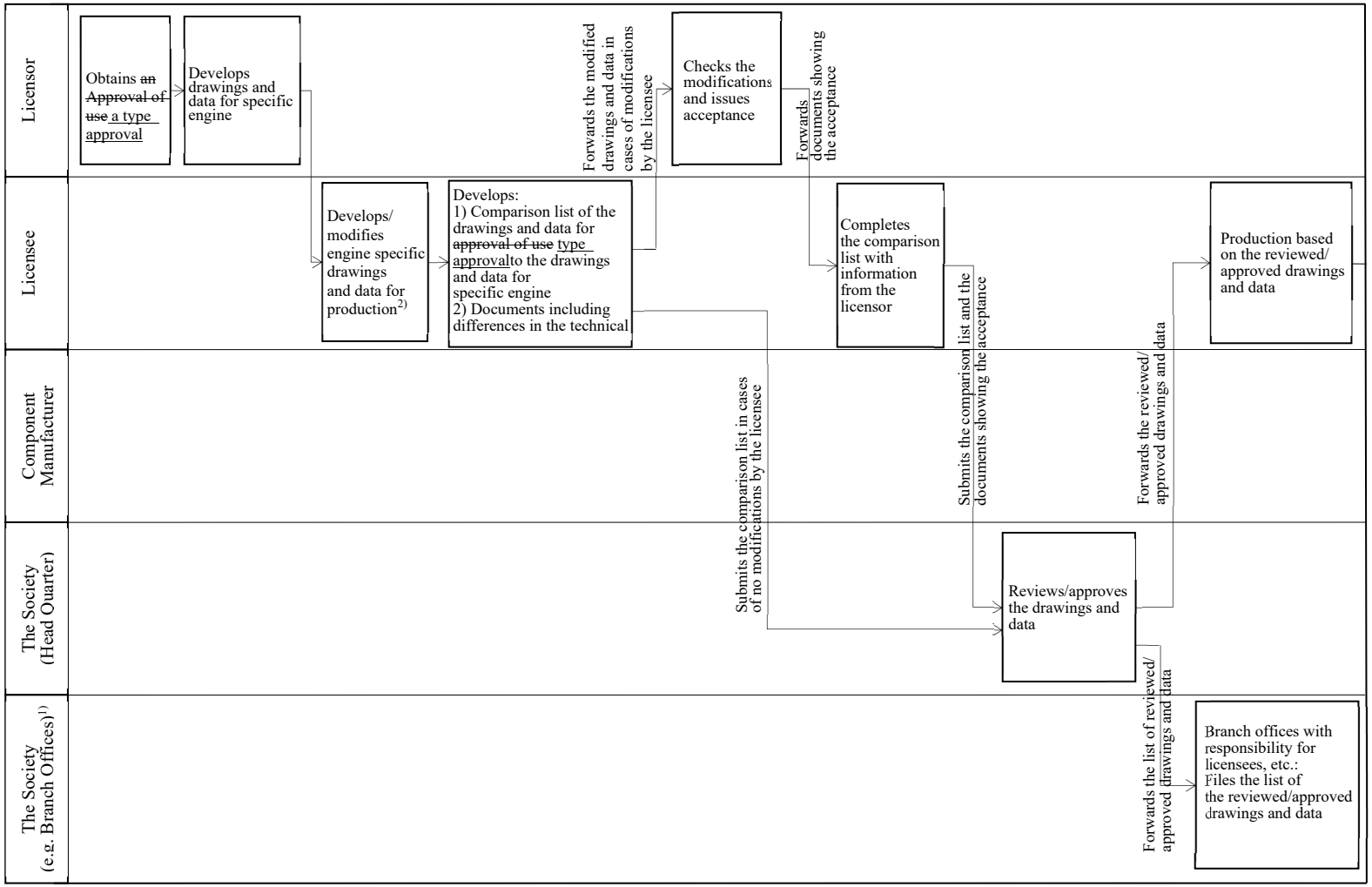
Amended	Original	Remarks
Part 4 HULL CONSTRUCTION AND EQUIPMENT OF TUGS AND PUSHERS	**Part 4 HULL CONSTRUCTION AND EQUIPMENT OF TUGS AND PUSHERS**	
Chapter 2 RUDDERS AND STERN FRAMES	**Chapter 2 RUDDERS AND STERN FRAMES**	
2.1 Rudders	**2.1 Rudders**	
2.1.13 Bearings of Rudder Stock and Pintles **2** "The type as deemed appropriate by the Society" stipulated in **Table 4.2.2, Part 4 of the Rules** means that approval is to be made in accordance with the requirements of **Chapter 5, Part 5 of Guidance for the Approval of Materials and Equipment for Marine Use**.	**2.1.13 Bearings of Rudder Stock and Pintles** **2** "The type as deemed appropriate by the Society" stipulated in **Table 4.2.2, Part 4 of the Rules** means that approval is to be made in accordance with the requirements of **Chapter 5, Part 4 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
Part 7 MACHINERY INSTALLATIONS	**Part 7 MACHINERY INSTALLATIONS**	
Chapter 2 RECIPROCATING INTERNAL COMBUSTION ENGINES	**Chapter 2 RECIPROCATING INTERNAL COMBUSTION ENGINES**	
2.1 General	**2.1 General**	
2.1.1 General **1** The wording "as specified separately by the Society"	**2.1.1 General** **1** The wording "as specified separately by the Society"	Changes due to the

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
specified in **2.1.1-2, Part 7 of the Rules** means "in accordance with **Chapter 8, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**".	specified in **2.1.1-2, Part 7 of the Rules** means "in accordance with **Chapter 8, Part 6 of Guidance for the Approval <u>and Type Approval</u> of Materials and Equipment for Marine Use**".	renaming of the "Guidance for the Approval"
2.1.4 Approval of Reciprocating Internal Combustion Engines	**2.1.4 Approval of Reciprocating Internal Combustion Engines**	
2 The phrase "design approval is to be obtained as specified separately by the Society" specified in **2.1.4-1(1)(a), Part 7 of the Rules** means that the design approval and design appraisal are to be obtained in accordance with **Chapter 8, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**.	**2** The phrase "design approval is to be obtained as specified separately by the Society" specified in **2.1.4-1(1)(a), Part 7 of the Rules** means that the design approval and design appraisal are to be obtained in accordance with **Chapter 8, Part 6 of Guidance for the Approval <u>and Type Approval</u> of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
3 The wording "the drawings and data of the reciprocating internal combustion engine whose approval of use has been obtained" specified in **(1)(c)**, **(1)(d)**, **(2)(a)** and **(2)(b)** of **2.1.4-1, Part 7 of the Rules** means those listed in **8.2.2, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**.	**3** The wording "the drawings and data of the reciprocating internal combustion engine whose approval of use has been obtained" specified in **(1)(c)**, **(1)(d)**, **(2)(a)** and **(2)(b)** of **2.1.4-1, Part 7 of the Rules** means those listed in **8.2.2, Part 6 of Guidance for the Approval <u>and Type Approval</u> of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
4 The wording "as specified separately by the Society" specified in **2.1.4-1(1)(d), Part 7 of the Rules** means "in accordance with **8.2.2-2, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**".	**4** The wording "as specified separately by the Society" specified in **2.1.4-1(1)(d), Part 7 of the Rules** means "in accordance with **8.2.2-2, Part 6 of Guidance for the Approval <u>and Type Approval</u> of Materials and Equipment for Marine Use**".	Changes due to the renaming of the "Guidance for the Approval"
6 The wording "as specified separately by the Society" specified in **2.1.4-1(4)(a), Part 7 of the Rules** means "in accordance with **8.2.2-4, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**".	**6** The wording "as specified separately by the Society" specified in **2.1.4-1(4)(a), Part 7 of the Rules** means "in accordance with **8.2.2-4, Part 6 of Guidance for the Approval <u>and Type Approval</u> of Materials and Equipment for Marine Use**".	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Fig. 7.2.1.4-1 Flow of Approval of Reciprocating Internal Combustion Engines		Terminology alignment

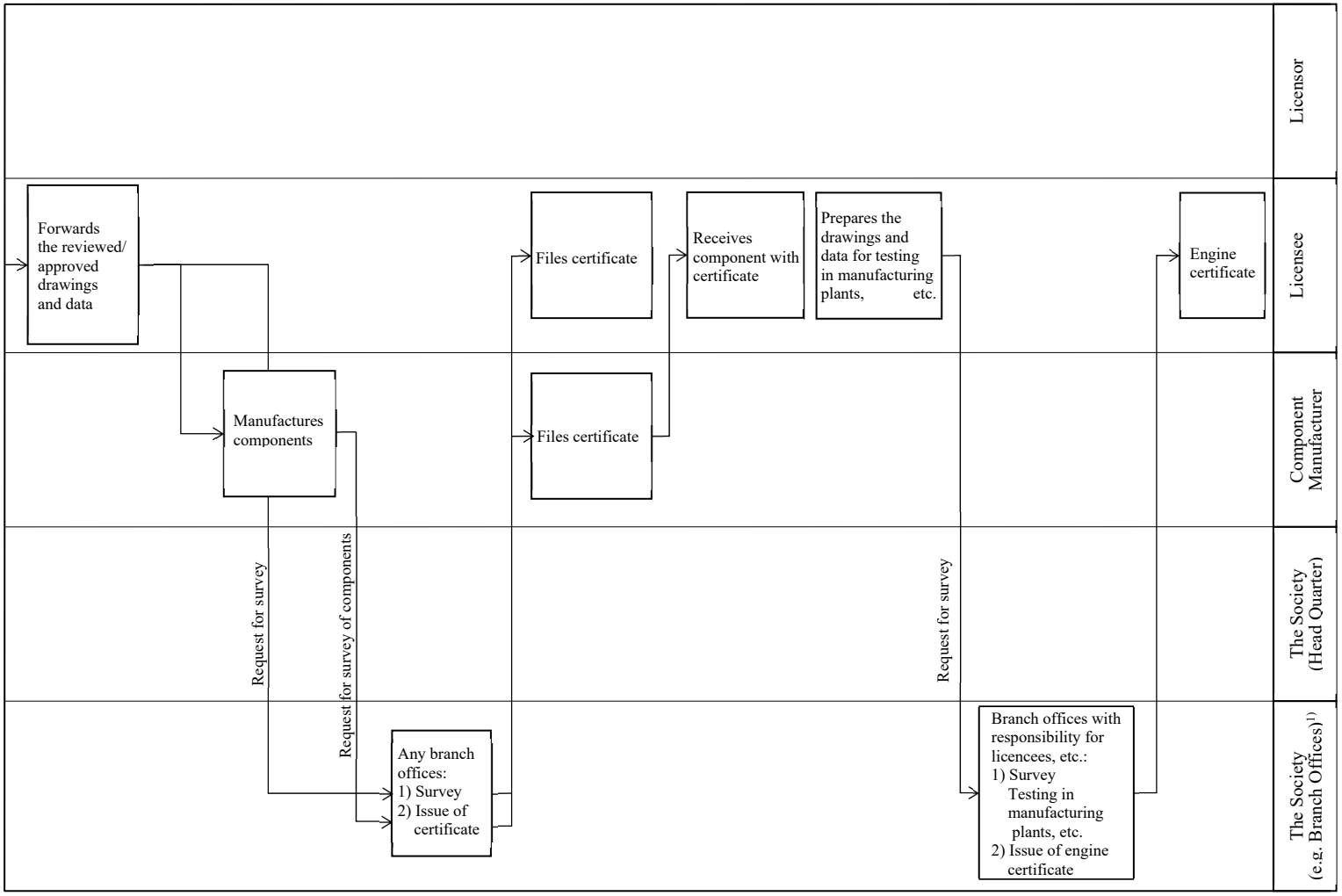


1) Branch offices with responsibility for licensees and/or component manufacturers in different locations
2) In cases of modifications by the licensee, refer to **(b)** and **(c)** of **2.1.4-1(2), Part 7 of the Rules**

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks

Fig. 7.2.1.4-1 Flow of Approval of Reciprocating Internal Combustion Engines (continued)



Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
2.4 Safety Devices	**2.4 Safety Devices**	
2.4.3 Protection against Crankcase Explosion **1** The wording "explosion relief valves of approved type" in **2.4.3-1, Part 7 of the Rules** means those valves approved by the Society in accordance with **Chapter 10, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**. **3** The installation and maintenance manual specified in **2.4.3-1(5), Part 7 of the Rules** is to contain the following information: (1) Description of valve with details of function and design limits (2) Copy of type approval test certification (3) Installation instructions (4) Maintenance in service instructions to include testing and renewal of any sealing arrangements (5) Actions required after a crankcase explosion	**2.4.3 Protection against Crankcase Explosion** **1** The wording "explosion relief valves of approved type" in **2.4.3-1, Part 7 of the Rules** means those valves approved by the Society in accordance with **Chapter 10, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. **3** The installation and maintenance manual specified in **2.4.3-1(5), Part 7 of the Rules** is to contain the following information: (1) Description of valve with details of function and design limits (2) Copy of type test certification (3) Installation instructions (4) Maintenance in service instructions to include testing and renewal of any sealing arrangements (5) Actions required after a crankcase explosion	Changes due to the renaming of the "Guidance for the Approval" Terminology alignment
2.4.5 Crankcase Oil Mist Detection Arrangements **2** The wording "crankcase oil mist detection arrangements required to be fitted to engines are to be approved type" stipulated in **2.4.5-2, Part 7 of the Rules** refers to crankcase oil mist detection arrangement approved in accordance with **Chapter 6, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**2.4.5 Crankcase Oil Mist Detection Arrangements** **2** The wording "crankcase oil mist detection arrangements required to be fitted to engines are to be approved type" stipulated in **2.4.5-2, Part 7 of the Rules** refers to crankcase oil mist detection arrangement approved in accordance with **Chapter 6, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
2.6 Tests	**2.6 Tests**	
2.6.1 Shop Tests	**2.6.1 Shop Tests**	
1 The wording "a procedure deemed appropriate by the Society" in **2.6.1-2(6)(c), Part 7 of the Rules** means the tests specified in **8.5.2-2(10), Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**1** The wording "a procedure deemed appropriate by the Society" in **2.6.1-2(6)(c), Part 7 of the Rules** means the tests specified in **8.5.2-2(10), Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
4 The wording "procedures deemed appropriate by the Society" in **2.6.1-5, Part 7 of the Rules** means the tests specified in **Chapter 11, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**4** The wording "procedures deemed appropriate by the Society" in **2.6.1-5, Part 7 of the Rules** means the tests specified in **Chapter 11, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
Chapter 4 SHAFTINGS	**Chapter 4 SHAFTINGS**	
4.2 Materials, Construction and Strength	**4.2 Materials, Construction and Strength**	
4.2.7 Corrosion Protection of Propeller Shafts and Stern Tube Shafts	**4.2.7 Corrosion Protection of Propeller Shafts and Stern Tube Shafts**	
2 The wording "corrosion resistant materials approved by the Society" in **4.2.7-1(3)** means those materials which have been subjected to approval tests specified in **2.4.2-5, Chapter 2, Part 6** of the "**Guidance for the Approval of Materials and Equipment for Marine Use**" and then which obtain type approval of machinery and equipment as a corrosion resistant material for propeller shafts or stern tube shafts.	**2** The wording "corrosion resistant materials approved by the Society" in **4.2.7-1(3)** means those materials which have been subjected to approval tests specified in **2.4.2-5, Chapter 2, Part 6** of the "**Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**" and then which obtain type approval of use of machinery and equipment as a corrosion resistant material for propeller shafts or stern tube shafts.	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Chapter 10 PIPES, VALVES, PIPE FITTINGS AND AUXILIARIES	**Chapter 10 PIPES, VALVES, PIPE FITTINGS AND AUXILIARIES**	
10.1 General	**10.1 General**	
10.1.6 Use of Special Materials	**10.1.6 Use of Special Materials**	
1 The wording "requirements specified otherwise" in **10.1.6-1, Part 7 of the Rules** means as follows. (1) In cases where rubber hoses, Teflon hoses or nylon hoses are used for the following pipes, only materials approved in accordance with the **Guidance for the Approval of Materials and Equipment for Marine Use** are to be used. (a) Pipes of Group I or Group II (b) Pipes likely to cause fire or flooding in cases where they rupture (2) Only plastic pipes (including vinyl pipes) approved by the Society in accordance with **Chapter 6, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use** are to be used. (3) (Omitted)	**1** The wording "requirements specified otherwise" in **10.1.6-1, Part 7 of the Rules** means as follows. (1) In cases where rubber hoses, Teflon hoses or nylon hoses are used for the following pipes, only materials approved in accordance with the **Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** are to be used. (a) Pipes of Group I or Group II (b) Pipes likely to cause fire or flooding in cases where they rupture (2) Only plastic pipes (including vinyl pipes) approved by the Society in accordance with **Chapter 6, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** are to be used. (3) (Omitted)	Changes due to the renaming of the "Guidance for the Approval"
10.3 Construction of Valves and Pipe Fittings	**10.3 Construction of Valves and Pipe Fittings**	
10.3.3 Mechanical Joints The wording "mechanical joints are to be of a Society approved type" stipulated in **10.3.3-1, Part 7 of the Rules**	**10.3.3 Mechanical Joints** The wording "mechanical joints are to be of a Society approved type" stipulated in **10.3.3-1, Part 7 of the Rules**	Changes due to the renaming of the

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
refers to those mechanical joints approved in accordance with **Chapter 9, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	refers to those mechanical joints approved in accordance with **Chapter 9, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	"Guidance for the Approval"
10.3.4 Flexible Hose Assemblies **1** The wording "to be approved by the Society" in **10.3.4-2, Part 7 of the Rules** means that approval is to be made in accordance with **2.4.2-11, Chapter 2, Part 6 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**10.3.4 Flexible Hose Assemblies** **1** The wording "to be approved by the Society" in **10.3.4-2, Part 7 of the Rules** means that approval is to be made in accordance with **2.4.2-11, Chapter 2, Part 6 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
Chapter 11 PIPING SYSTEMS	**Chapter 11 PIPING SYSTEMS**	
11.8 Sounding Pipes	**11.8 Sounding Pipes**	
11.8.4 Construction of Liquid Level Indicators The wording "a type that has been approved by the Society" in **11.8.4, Part 7 of the Rules** means those liquid level indicators approved in accordance with the requirements of **Chapter 4, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use** and the wording "other standards approved by the Society" means *JIS F 7211* "5K level gauges with valves", *JIS F 7215* "Flat glass oil level gauges" or any equivalent standards.	**11.8.4 Construction of Liquid Level Indicators** The wording "a type that has been approved by the Society" in **11.8.4, Part 7 of the Rules** means those liquid level indicators approved in accordance with the requirements of **Chapter 4, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** and the wording "other standards approved by the Society" means *JIS F 7211* "5K level gauges with valves", *JIS F 7215* "Flat glass oil level gauges" or any equivalent standards.	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Chapter 14 AUTOMATIC AND REMOTE CONTROL	**Chapter 14 AUTOMATIC AND REMOTE CONTROL**	
14.7 Tests	**14.7 Tests**	
14.7.1 Shop Tests **2** The wording "The procedures for these tests are to be deemed appropriate by the Society" specified in **14.7.1(1), Part 7 of the Rules** means those procedures in accordance with **Chapter 1, Part 7 of "Guidance for the Approval of Materials and Equipment for Marine Use."**	**14.7.1 Shop Tests** **2** The wording "The procedures for these tests are to be deemed appropriate by the Society" specified in **14.7.1(1), Part 7 of the Rules** means those procedures in accordance with **Chapter 1, Part 7 of "Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use."**	Changes due to the renaming of the "Guidance for the Approval"
Part 8 ELECTRICAL INSTALLATIONS	**Part 8 ELECTRICAL INSTALLATIONS**	
Chapter 1 GENERAL	**Chapter 1 GENERAL**	
1.2 Testing	**1.2 Testing**	
1.2.1 Shop Tests **5** The wording "to be subjected to type tests" in **1.2.1-4, Part 8 of the Rules** means **Part 8 of the Guidance for the Approval of Materials and Equipment for Marine Use**. Equipment and cables approved are made public in **the List of Approved Materials and Equipment**.	**1.2.1 Shop Tests** **5** The wording "to be subjected to type tests" in **1.2.1-4, Part 8 of the Rules** means **Part 8 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**. Equipment and cables approved are made public in **the List of Approved Materials and Equipment**.	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Chapter 2 ELECTRICAL INSTALLATIONS AND SYSTEM DESIGN	**Chapter 2 ELECTRICAL INSTALLATIONS AND SYSTEM DESIGN**	
2.9 Cables	**2.9 Cables**	
2.9.13 Supports and Fixing of Cables	**2.9.13 Supports and Fixing of Cables**	
4 The wording "any tests otherwise specified by the Society" referred to in **2.9.13-3(4)(a), Part 8 of the Rules** are those tests specified in **3.4.2, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**4** The wording "any tests otherwise specified by the Society" referred to in **2.9.13-3(4)(a), Part 8 of the Rules** are those tests specified in **3.4.2, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
5 The wording "those tests" referred to in **2.9.13-3(4)(f), Part 8 of the Rules** are those safe working load tests specified in **3.4.2(3), Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use**.	**5** The wording "those tests" referred to in **2.9.13-3(4)(f), Part 8 of the Rules** are those safe working load tests specified in **3.4.2(3), Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	Changes due to the renaming of the "Guidance for the Approval"
Part 9 FIRE PROTECTION, DETECTION AND EXTINCTION	**Part 9 FIRE PROTECTION, DETECTION AND EXTINCTION**	
Chapter 2 DEFINITIONS	**Chapter 2 DEFINITIONS**	
2.1 General	**2.1 General**	
2.1.1 General Rules	**2.1.1 General Rules**	
In respect of fire protection materials specified in **Part**	In respect of fire protection materials specified in **Part**	Changes due to the

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
9 of the Rules, the wording "approved by the Society in accordance with the Fire Test Procedures Code" means those complying with the test standards specified in **Chapter 1, Part 5 of GUIDANCE FOR THE APPROVAL OF MATERIALS AND EQUIPMENT FOR MARINE USE** and approved by the Society.	**9 of the Rules**, the wording "approved by the Society in accordance with the Fire Test Procedures Code" means those complying with the test standards specified in **Chapter 1, Part 4 of GUIDANCE FOR THE APPROVAL AND TYPE APPROVAL OF MATERIALS AND EQUIPMENT FOR MARINE USE** and approved by the Society.	renaming of the "Guidance for the Approval"
Chapter 3 PROBABILITY OF IGNITION	**Chapter 3 PROBABILITY OF IGNITION**	
3.2 Arrangements for Oil Fuel, Lubrication Oil and Other Flammable Oils	**3.2 Arrangements for Oil Fuel, Lubrication Oil and Other Flammable Oils**	
3.2.2 Arrangements for Oil Fuel **8** The wording "ones approved by the Society" in **3.2.2(3)(e)ii), Part 9 of the Rules** means the oil level gauges approved in accordance with the requirements of **Chapter 4, Part 7 of the Guidance for the Approval of Materials and Equipment for Marine Use** and the wording "the standard deemed approved by the Society" means the *JIS F 7215* "Flat glass oil-level gauges" or equivalent.	**3.2.2 Arrangements for Oil Fuel** **8** The wording "ones approved by the Society" in **3.2.2(3)(e)ii), Part 9 of the Rules** means the oil level gauges approved in accordance with the requirements of **Chapter 4, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** and the wording "the standard deemed approved by the Society" means the *JIS F 7215* "Flat glass oil-level gauges" or equivalent.	Changes due to the renaming of the "Guidance for the Approval"
3.5 Special Requirements for Tank Barges	**3.5 Special Requirements for Tank Barges**	
3.5.4 Cargo Tank Venting **3** The design, arrangement, etc. of devices to prevent	**3.5.4 Cargo Tank Venting** **3** The design, arrangement, etc. of devices to prevent	

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
the passage of flame (including high velocity devices specified in **3.5.4-5(1)(d), Part 9 of the Rules**) specified in **3.5.4-4, Part 9 of the Rules** are to comply with the following requirements. (1) Terms used in this Chapter are defined as follows. (a) A device to prevent the passage of flame is a device to prevent the passage of flame through the venting system into the cargo tanks, and includes a flame screen, a flame arrester, a detonation flame arrester and a high velocity device. Such devices are to be of approved type in accordance with the provisions of **Chapter 7, Part 6 of Guidance for the Approval of Materials and Equipment for Marine Use**. ((b) to (g) are omitted.) (2) Devices to prevent the passage of flame (hereinafter referred to as the devices in **3.5.4**) is to be fitted according to the respective types at such a position that the passage of flame through the openings specified in the followings into the cargo tanks can be prevented. Notwithstanding the above, flame arresters and the devices to be fitted in a venting system for cargo tanks protected against a flammable condition by an inert gas system complying with **Chapter 35, Part R of the Rules for the Survey and Construction of Steel Ships**, may be of a type for which an endurance burning test is dispensed with. High velocity devices may be of a type for which a flash back test and an endurance burning test are dispensed with.	the passage of flame (including high velocity devices specified in **3.5.4-5(1)(d), Part 9 of the Rules**) specified in **3.5.4-4, Part 9 of the Rules** are to comply with the following requirements. (1) Terms used in this Chapter are defined as follows. (a) A device to prevent the passage of flame is a device to prevent the passage of flame through the venting system into the cargo tanks, and includes a flame screen, a flame arrester, a detonation flame arrester and a high velocity device. Such devices are to be of approved type in accordance with the provisions of **Chapter 7, Part 6 of Guidance for the Approval <u>and Type Approval</u> of Materials and Equipment for Marine Use**. ((b) to (g) are omitted.) (2) Devices to prevent the passage of flame (hereinafter referred to as the devices in **3.5.4**) is to be fitted according to the respective types at such a position that the passage of flame through the openings specified in the followings into the cargo tanks can be prevented. Notwithstanding the above, flame arresters and the devices to be fitted in a venting system for cargo tanks protected against a flammable condition by an inert gas system complying with **Chapter 35, Part R of the Rules for the Survey and Construction of Steel Ships**, may be of a type for which an endurance burning test is dispensed with. High velocity devices may be of a type for which a flash back test and an endurance burning test are dispensed with.	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
(a) A flame screen, a flame arrester, a detonation flame arrester, or a suitable wire gauze complying with the requirements in **7.4.2-2(3)(a)i)** through **ix), Part 6 of GUIDANCE FOR THE APPROVAL OF MATERIALS AND EQUIPMENT FOR MARINE USE** as well as those in **15.6.14-3(1), Part 7** is to be fitted at the following openings: (i) to iii) are omitted.) ((b) and (c) are omitted.) ((3) to (5) are omitted.)	(a) A flame screen, a flame arrester, a detonation flame arrester, or a suitable wire gauze complying with the requirements in **7.4.2-2(3)(a)i)** through **ix), Part 6 of GUIDANCE FOR THE APPROVAL AND TYPE APPROVAL OF MATERIALS AND EQUIPMENT FOR MARINE USE** as well as those in **15.6.14-3(1), Part 7** is to be fitted at the following openings: (i) to iii) are omitted.) ((b) and (c) are omitted.) ((3) to (5) are omitted.)	Changes due to the renaming of the "Guidance for the Approval"
3.5.8 Gas Measurement **2** The wording "deemed appropriate by the Society" in **3.5.8(1)** and **(2), Part 9 of the Rules** means to be approved by the Society in accordance with **Chapter 7**, **Part 7** of **"Guidance for the Approval of Materials and Equipment for Marine Use"** or to pass the test of the organization deemed appropriate by the Society.	**3.5.8 Gas Measurement** **2** The wording "deemed appropriate by the Society" in **3.5.8(1)** and **(2), Part 9 of the Rules** means to be approved by the Society in accordance with **Chapter 7**, **Part 7** of **"Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use"** or to pass the test of the organization deemed appropriate by the Society.	Changes due to the renaming of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
Chapter 7 CONTAINMENT OF FIRE AND STRUCTURAL INTEGRITY	**Chapter 7 CONTAINMENT OF FIRE AND STRUCTURAL INTEGRITY**	
7.3 Special Requirements for Tank Barges	**7.3 Special Requirements for Tank Barges**	
7.3.2 Protection of Cargo Tank Structure against Pressure or Vacuum	**7.3.2 Protection of Cargo Tank Structure against Pressure or Vacuum**	
1 The performance, installation procedures, etc. of pressure/vacuum valves specified in **7.3.2-1(1), Part 9 of the Rules** are to comply with the following requirements. The wording "the procedure deemed appropriate by the Society" means the procedure specified in **Chapter 7, Part 6 of "Guidance for the Approval of Materials and Equipment for Marine Use"**. Approved pressure/vacuum valves are made public on "**List of approved materials and equipment**".	**1** The performance, installation procedures, etc. of pressure/vacuum valves specified in **7.3.2-1(1), Part 9 of the Rules** are to comply with the following requirements. The wording "the procedure deemed appropriate by the Society" means the procedure specified in **Chapter 7, Part 6 of "Guidance for the Approval <u>and Type Approval</u> of Materials and Equipment for Marine Use"**. Approved pressure/vacuum valves are made public on "**List of approved materials and equipment**".	Changes due to the renaming of the "Guidance for the Approval"
((1) to (3) are omitted.)	((1) to (3) are omitted.)	
3 The design, arrangement, etc. of high level alarms and level detecting devices of an overflow control system specified in **7.3.2-3(1), Part 9 of the Rules** are to comply with the following requirements. The wording "procedure deemed appropriate by the Society" in **7.3.2-3(1), Part 9 of the Rules** means the procedure specified in **Chapter 7, Part 6 of "Guidance for the Approval of Materials and Equipment for Marine Use"**. Approved high level alarms and level detecting devices are made public on "**List of approved materials and equipment**".	**3** The design, arrangement, etc. of high level alarms and level detecting devices of an overflow control system specified in **7.3.2-3(1), Part 9 of the Rules** are to comply with the following requirements. The wording "procedure deemed appropriate by the Society" in **7.3.2-3(1), Part 9 of the Rules** means the procedure specified in **Chapter 7, Part 6 of "Guidance for the Approval <u>and Type Approval</u> of Materials and Equipment for Marine Use"**. Approved high level alarms and level detecting devices are made public on "**List of approved materials and equipment**".	Changes due to the renaming of the "Guidance for the Approval"
((1) and (2) are omitted.)	((1) and (2) are omitted.)	

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
GUIDANCE FOR THE APPROVAL OF MATERIALS AND EQUIPMENT FOR MARINE USE	**GUIDANCE FOR THE APPROVAL AND TYPE APPROVAL OF MATERIALS AND EQUIPMENT FOR MARINE USE**	To align with the structure of other rules, the General Provisions are designated as Part 1, and the former Parts 1 to 4 are reorganized accordingly.
Part 1 GENERAL	**Part I GENERAL**	
Chapter 1 GENERAL	**Chapter 1 GENERAL**	
1.1 Application	**1.1 Application**	
1 This guidance applies to tests and inspection of materials and equipment for marine use for which advance approval by the NIPPON KAIJI KYOKAI (hereinafter referred to as "the Society") are required by the relevant requirements in **Rules for the Survey and Construction of Steel Ships**, **Rules for Lifting Appliances and Anchor Handling Winches**, **Rules for Cargo Refrigerating Installations**, **Rules for Diving Systems**, **Rules for Marine Pollution Prevention Systems**, **Rules for Ballast Water Management Installations**, **Rules for Safety Equipment**, **Rules for the Survey and Construction of Passenger Ships**, **Rules for High Speed Craft**, **Rules for the Survey and Construction of Inland Waterway Ships**, **Rules for the Survey and Construction of Ships of Fibreglass Reinforced Plastics** and **Rules for Floating Docks**, and their Guidance (hereinafter referred to as "Rules etc.").	**1** This guidance applies to tests and inspection of materials and equipment for marine use for which advance approval or type approval by the NIPPON KAIJI KYOKAI (hereinafter referred to as "the Society") are required by the relevant requirements in **Rules for the Survey and Construction of Steel Ships**, **Rules for Cargo Handling Appliances**, **Rules for Cargo Refrigerating Installations**, **Rules for Diving Systems**, **Rules for Marine Pollution Prevention Systems**, **Rules for Ballast Water Management Installations**, **Rules for Safety Equipment**, **Rules for the Survey and Construction of Passenger Ships**, **Rules for High Speed Craft**, **Rules for the Survey and Construction of Inland Waterway Ships**, **Rules for the Survey and Construction of Ships of Fibreglass Reinforced Plastics** and **Rules for Floating Docks**, and their Guidance (hereinafter referred to as "Rules etc.").	Terminology alignment
Notwithstanding the absence of specific requirements in this guidance, the Society may, upon application, conduct	(Newly added)	For equipment and other items for which approval

Amended	Original	Remarks
examination, testing, and inspection in accordance with the intent of the said guidance, and issue a certificate to manufacturers attesting that the equipment complies with technical requirements deemed appropriate by the Society.		requirements are not specified in the Rules, provisions for certification of conformity shall be established for those deemed appropriate by the Society.
3 This guidance is, in principle, to apply to each manufacturing plant. **4** The confirmation survey of manufacturing and quality control procedure required in the guidance may be dispensed with partly or totally subject to the approval in accordance with "**Rules for Approval of Manufacturers and Service Suppliers**". **5** In cases where the manufacturing process and the test result have been approved by another organization and the manufacturer has a data showing actual manufacturing records within the specific period, the Society will take into account such records and tests results and may exempt the part or all of the approval tests for the manufacturing processes for materials and equipment for marine use required by this guidance. **6** At the inspections, tests, and surveys, etc. (hereinafter referred together as "surveys" in this sub-paragraph), in lieu of traditional ordinary surveys where the Surveyor is in attendance, the Society may approve other survey methods which it considers to be appropriate.	**2** This guidance is, in principle, to apply to each manufacturing plant. **3** The confirmation survey of manufacturing and quality control procedure required in the guidance may be dispensed with partly or totally subject to the approval in accordance with "**Rules for Approval of Manufacturers and Service Suppliers**". **4** In cases where the manufacturing process and the test result have been approved by another organization and the manufacturer has a data showing actual manufacturing records within the specific period, the Society will take into account such records and tests results and may exempt the part or all of the approval tests for the manufacturing processes for materials and equipment for marine use required by this guidance. **5** At the inspections, tests, and surveys, etc. (hereinafter referred together as "surveys" in this sub-paragraph), in lieu of traditional ordinary surveys where the Surveyor is in attendance, the Society may approve other survey methods which it considers to be appropriate.	
1.2 Purpose	**1.2 Purpose**	
The purpose of this guidance is to specify the procedures for	The purpose of this guidance is to specify the procedures for	Terminology alignment

Amended	Original	Remarks
approval by the Society of the materials and equipment for marine use delivered from manufacturing plants as finished products in the course of examinations for the construction, materials, scantlings and workmanship of the hull, equipment and machinery required by **2.1.1, Part B of Rules for the Survey and Construction of Steel Ships** excluding the examinations for hull outfitting work and machinery assembly and installation work carried out at shipyards or manufacturer's shops.	approval and type approval by the Society of the materials and equipment for marine use delivered from manufacturing plants as finished products in the course of examinations for the construction, materials, scantlings and workmanship of the hull, equipment and machinery required by **2.1.1, Part B of Rules for the Survey and Construction of Steel Ships** excluding the examinations for hull outfitting work and machinery assembly and installation work carried out at shipyards or manufacturer's shops.	
Chapter 2 DEFINITIONS	**Chapter 2 DEFINITIONS**	
2.1 Approval	**2.1 Approval**	
Approval in this guidance means to certify for the manufacturers of materials and equipment for marine use that materials and equipment comply with this guidance based on the examinations, tests and inspections there. In principle, the types of approval are to be those specified in **2.2** and **2.3**. Approvals that do not fall under these categories are to be treated as specified in **2.4**.	Approval means to certify for the manufacturers of the materials and equipment for marine use that the materials and equipment comply with this guidance by carrying out the examination, tests and inspection specified in this guidance for the materials and equipment.	To amend the definition of "approval"
(Delete)	**2.2 Type Approval**	
(Delete)	Type Approval means to certify for the manufacturers of the materials and equipment for marine use that the materials and equipment comply with the provisions for the type approved products in this guidance by carrying out the examination, tests and inspection specified in this guidance	Delete

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
	for the materials and equipment. For type approved products, tests and inspection are not required to individual products.	
(Delete)	**2.3 Approval of Mass Produced Machinery and Equipment**	
2.2 Approval of Manufacturing Process Approval of Manufacturing Process means, on condition that the uniform quality of the products can be ensured, to certify for the manufacturers that the manufacturing process complies with the provisions in this guidance by carrying out the examination, tests and inspection specified in this guidance for their typical sample. Additionally, the inspection of products at the time of shipment is subject to relevant requirement in the **Rules for the Survey and Construction of Steel Ships** and other technical rules of the Society.	**2.4 Approval of Manufacturing Process** Approval of Manufacturing Process means, on condition that the uniform quality of the products can be ensured, to certify for the manufacturers that the manufacturing process complies with the provisions in this guidance by carrying out the examination, tests and inspection specified in this guidance in advance for their typical sample.	To revise the definition of approval of anufacturing process
2.3 Type Approval Type Approval means, for the equipment for marine use to which the advance approval by the Society for their use is required by the Rules etc. before installed on board, to certify for the manufacturers that the equipment and materials comply with the provisions regarding quality management and products in this guidance by carrying out	**2.5 Approval of Use** Approval of Use means, for the equipment for marine use to which the advance approval by the Society for their use is required by the Rules etc. before installed on board, to certify for the manufacturers that the equipment complies with the provisions in this guidance by carrying out the examination, tests and inspection for their typical sample.	To change “approval of use” to “type approval” To include provisions related to quality control in the definition

Amended	Original	Remarks
the examination, tests and inspection for their typical sample in principal. Additionally, the inspection of products at the time of shipment is subject to relevant requirements in the **Rules for the Survey and Construction of Steel Ships** and other technical rules of the Society.		
2.4 Other Approval	**(Newly added)**	
Approvals which do not fall under **2.2** and **2.3**, and which are carried out to prove the conformity of onboard materials, onboard equipment, etc. to the functions, performance, etc. specified in the construction method, standards, regulations, etc.	(Newly added)	To define approvals for items not covered by 2.2 and 2.3 of this chapter, such as "approval of cable laying"
(Delete)	**2.6 Approval of Standardized Design**	To delete "Approval of standard design" due to its transfer to Appendix of Part B.
(Delete)	Approval of Standardized Design means a method to certifies for the manufacturers that the drawings and documents specifying the particulars, construction, dimensions and materials of equipment for marine use may be dealt with as the standard design, by conducting the approval for these drawings in advance.	
(Delete)	**2.7 Approval of Prototype**	To delete the prototype approval in order to replace it with type approval
(Delete)	Approval of prototype means to certify for the	

Amended	Original	Remarks
	manufacturers that machinery and equipment for marine use comply with the provisions in this Guidance by carrying out the examinations, tests and inspection against the prototype of these products which are required by the Rules or Guidance that prototype of products is to be approved by the Society in advance before products are sent to markets.	
Part 2 METALLIC MATERIALS	**Part 1 METALLIC MATERIALS**	To align with the structure of other rules, the General Provisions are designated as Part 1, and the former Parts 1 to 4 are reorganized accordingly.
Chapter 1 APPROVAL OF MANUFACTURING PROCESS OF ROLLED STEELS	**Chapter 1 APPROVAL OF MANUFACTURING PROCESS OF ROLLED STEELS**	Terminology alignment
1.2 Approval Application	**1.2 Approval Application**	
1.2.1 Approval Application Form Manufacturer who applies for the approval of the manufacturing process of rolled steels is to submit the appropriate application form (**Form 1-1**) filled in with required data and information to the Society (branch office concerned). For applications for the approval of the manufacturing process of corrosion resistant steel for cargo oil tanks specified in **3.13, Part K of the Rules for the Survey and Construction of Steel Ships**, the appropriate application form (**Form 1-2**) is to be used.	**1.2.1 Approval Application Form** Manufacturer who applies for the approval of the manufacturing process of rolled steels is to submit a copy of the appropriate application form (**Form 1-1**) filled in with required data and information to the Society (branch office concerned). For applications for the approval of the manufacturing process of corrosion resistant steel for cargo oil tanks specified in **3.13, Part K of the Rules for the Survey and Construction of Steel Ships**, the appropriate application form (**Form 1-2**) is to be used.	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
1.2.2 Documents to be Submitted **1** Each of the documents given in **(1)** and **(2)** are to be submitted together with the appropriate application form specified in **1.2.1**. ((1) and (2) are omitted.)	**1.2.2 Documents to be Submitted** **1** Three copies each of the documents given in **(1)** and **(2)** are to be submitted together with the appropriate application form specified in **1.2.1**. ((1) and (2) are omitted.)	To delete the specification of the number of copies due to digitization
1.4 Approval Test	**1.4 Approval Test**	
1.4.2 Selection of Test Samples **4** Where the maximum manufacturing thicknesses of rolled steels for hulls, rolled steels for low temperature service and high strength rolled steels for offshore structures is more than 50 *mm* and in cases where the first approval of at least one item of deoxidation practice, grain refining and micro-alloying elements, heat treatment, steel making process and steel casting process, the Society may request an additional test sample of which thickness is indicated with a ● mark in **Table 2.1-1** or some other proper thickness, in addition to the test samples in accordance with **-2**.	**1.4.2 Selection of Test Samples** **4** Where the maximum manufacturing thicknesses of rolled steels for hulls, rolled steels for low temperature service and high strength rolled steels for offshore structures is more than 50 *mm* and in cases where the first approval of at least one item of deoxidation practice, grain refining and micro-alloying elements, heat treatment, steel making process and steel casting process, the Society may request an additional test sample of which thickness is indicated with a ● mark in **Table 1.1-1** or some other proper thickness, in addition to the test samples in accordance with **-2**.	Figure and table numbers have been changed due to reorganization
Fig. 2.1-1 Selection of Test Samples (an example) (Figure is omitted.)	Fig. 1.1-1 Selection of Test Samples (an example) (Figure is omitted.)	Figure and table numbers have been changed due to reorganization
Table 2.1-1 Standard Thickness and Dimensions of Test Samples (Table is omitted.)	Table 1.1-1 Standard Thickness and Dimensions of Test Samples (Table is omitted.)	Figure and table numbers have been changed due to reorganization

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
1.4.3 Details of Test **1** Approval tests for each of rolled steels are to be performed for each test item indicated with a ○ mark in **Table 2.1-2** and the test procedure and judgement standard are to be accordance with **Table 2.1-3**. However, when deemed necessary by the Society, Society may request the increase of test piece, addition of test item (except the test item indicated in **Table 2.1-2** which is included the test related to hot workability, fatigue test, weld cracking test, *CTOD* tests of welded joints etc.) and submission of proper technical information.	**1.4.3 Details of Test** **1** Approval tests for each of rolled steels are to be performed for each test item indicated with a ○ mark in **Table 1.1-2** and the test procedure and judgement standard are to be accordance with **Table 1.1-3**. However, when deemed necessary by the Society, Society may request the increase of test piece, addition of test item (except the test item indicated in **Table 1.1-2** which is included the test related to hot workability, fatigue test, weld cracking test, *CTOD* tests of welded joints etc.) and submission of proper technical information.	Figure and table numbers have been changed due to reorganization
3 For approval of the manufacturing process of the rolling bars for offshore chains, in the case of initial approval and/or changes in any approved conditions, the approval test specified in **2.4, Part 3** is to be carried out in addition to the test specified in this Chapter.	**3** For approval of the manufacturing process of the rolling bars for offshore chains, in the case of initial approval and/or changes in any approved conditions, the approval test specified in **2.4, Part 2** is to be carried out in addition to the test specified in this Chapter.	To align with the structure of other rules, the General Provisions are designated as Part 1, and the former Parts 1 to 4 are reorganized accordingly.
Table 2.1-2 Approval Test Items for Rolled Steels (Table is omitted.)	Table 1.1-2 Approval Test Items for Rolled Steels (Table is omitted.)	Figure and table numbers have been changed due to reorganization

Table ~~1~~2.1-3 Approval Testing Method and Acceptance Criteria

Approval test item	Selected location of test samples (1) (2)	Length direction of test specimen (3) (4)	Testing method	Acceptance criteria	Notes
(Omitted)					

Figure and table numbers have been changed due to reorganization

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended								Original								Remarks
	Base metal test	(Omitted)														
		V-notch Charpy impact test	Top	Parallel	Using *U*4 test specimen, the transition temperature curve of the absorbed energy and fracture surface ratio is to be determined by testing three pieces at each temperature in addition to the lateral expansion of test specimen. Furthermore, the test temperature is to include the temperature as specified in **Part K of the Rules**, and its interval is to be 10 ~ 20℃.(7)	For decisions other than those specified according to **Chapter 3**, **Part K of the Rules** to be as appropriate by the Society.	・ In the case of hot coils, test samples are also to be selected from the middle of length direction specified in **1.4.2-1**. ・ In the case of high strength rolled steels for offshore structures, additional test specimens are to be taken with their longitudinal axis parallel to the final direction of rolling from samples selected at bottoms. ・ *V*-notch charpy impact test specimens for stainless clad steels are to be taken from the base material. ・ In the case of steels over 40 *mm* in thickness, test specimens are to be taken from 1/4 and 1/2 of thickness. ・ In the case of rolled steels for hull, the test temperatures are to include at least the temperatures in **Table ~~1~~2.1-4**. ・ In the case of high strength rolled steels for offshore structures, the test temperatures are to include at least the temperatures in **Table ~~1~~2.1-5**.							
				Transverse												
			Bottom	Parallel												

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended							Original				Remarks
	Base metal test	Strain aging charpy impact test	Top	Parallel	Using *U*4 test specimen, the transition temperature curve of the absorbed energy and fracture surface ratio is to be determined by testing three pieces at each temperature in addition to the lateral expansion of test specimen. Furthermore, the test temperature is to include the temperature as specified in **Part K of the Rules**, and the test specimens which have been maintained for one hour at 250℃ after strain of 5% or 10% have been applied is, as a rule, to be used.	To be as deemed appropriate by the Society.	・ In the case of hot coils, test samples are also to be selected from the middle of length direction specified in **1.4.2-1**. ・ In the case of steel other than steel plates (including flat bars not less than 600 *mm* in width), the test may be omitted. ・ In the case of high strength rolled steels for offshore structures, additional test specimens are to be taken with their longitudinal axis parallel to the final direction of rolling ・ In the case of steels over 40 *mm* in thickness, test specimens are to be taken from 1/4 and 1/2 of thickness. ・ In the case of rolled steels for hulls, the test temperatures are to include at least the temperatures in **Table ~~1~~2.1-4**. ・ In the case of high strength rolled steels for offshore structures, the test temperatures are to include at least the temperatures in **Table ~~1~~2.1-5**. ・ In the case of high strength rolled steels for offshore structures, this test may be carried out on the thickest plate.		
		Hydrogen embrittlement test	Top	Parallel	In accordance with the requirements in **Part K of the Rules**.	In accordance with the requirements in **Part K of the Rules**	-				
			Bottom	Parallel							

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended							Original							Remarks
(Omitted)														
Weldability (5) (6) (7)	Butt welding tensile test	Top	Transverse for welding direction	Tensile test is to be carried out for one test specimen of *U2A* or *U2B*	In accordance with the requirements in **Chapter 4, Part M of the Rules**.	• In the case of steels other than steel plates (including flat bars not less than 600 *mm* in width), the test may be omitted. • Test specimens are, in principle, to be selected from each test sample specified in **Table ~~1~~2.1-6**. • When the capacity of a test machine is exceeded by the use of a full-thickness specimen, the test specimen may be divided in the thickness direction to be tested.								
	Butt welding impact test	Top		One set of three *U*4 test specimens is to be selected from at weld junction, 2 *mm* from weld junction, 5 *mm* from weld junction and 20 *mm* from weld junction of position of notch respectively (Refer to **Fig. ~~1~~2.1-2**), and tested at temperature in accordance with **Part K of the Rules**.	To be as deemed appropriate by the Society.	• In the case of steels other than steel plates (including flat bars not less than 600 *mm* in width), the test may be omitted. • Test specimens are, in principle, to be selected from each test sample specified in **Table ~~1~~2.1-6**. • Test specimens are to be taken at 1-2 *mm* below the face sides of test samples. • For high strength rolled steels for offshore structures, specimens whose notches are located at the weld metal are to be tested in addition to the specimens specified in the left column. In addition, in cases where plate thickness is not less than 50 *mm*, test specimens at root sides are required for each aforementioned position.							

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended									Original					Remarks
	Weldability (5) (6) (7)	Welding hardness test	Top	—	Rolled steels for hull Rolled steels for low temperature service High strength rolled steel for offshore structures (Each plate is to include steel flats not less than 600 *mm* in width)	At sections of butt welding joints, welding hardness tests are measured 0.7 *mm* pitch from weld junction to base metal along with the two parallel lines which are 1 *mm* inside from the both surface of base metal.	Values of maximum hardness are not to exceed the values specified in **Table ~~1~~2.1-8**. Other steel plates are to be as deemed appropriate by the Society.	・ Test specimens are, in principle, to be selected from each test sample specified in **Table ~~1~~2.1-6**. ・ Sketches of weld joints depicting groove dimensions, number of passes, and hardness indentations are to be attached to test reports together with photomacrographs of weld cross sections. ・ Hardness tests are carried out at HV5 for rolled steels for hulls, and at HV10 for high strength rolled steels for offshore structures.		
					Rolled steels other than those mentioned above	*JIS Z 3101* or equivalent method.	To be as deemed appropriate by the Society.	-		
		Y-shape weld crack test (Hydrogen crack test)	Top	—	To be in accordance with internationally recognized standards such as *ISO* 17642-2:2005, etc.		To be as deemed appropriate by the Society.	・ In the case of steels other than steel plates (including flat bars not less than 600 *mm* in width), the test may be omitted. ・ For high strength rolled steels for offshore structures, the relationship between minimum preheat temperature and thickness is to be described.		

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended							Original						Remarks
	CTOD test or deep notch test	Top	Transverse for welding direction	*CTOD* tests are to be carried out in accordance with *ISO* 15653 or the equivalent. Three test specimens notched in the through thickness direction in grain coarsened *HAZ* (*CGHAZ*) are to be selected for each butt weld test assembly and tested at -10°C. When performing deep notch tests at the time of approval, the Society is to be consulted about the dimensions of test specimens, test conditions, etc.	To be as deemed appropriate by the Society.	・ In the case steels of other than steel plates (including flat bars not less than 600 *mm* in width), the test may be omitted. ・ *CTOD* specimens for the high strength rolled steels for offshore structures are to be taken from test samples **(b)** and **(c)** specified in **Table ~~1~~2.1-6**. Specimen dimension are to comply with **Table ~~1~~2.1-9**.						

Notes:

((1) to (4) are omitted.)

(5) The bevel preparation is to be 1/2V or K related to thickness, and the test sample is to be welded by procedures commonly used for the relevant steels in consideration of the welding heat inputs specified in **Table ~~1~~2.1-6**.

((6) to (8) are omitted.)

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
1.4.5 Test Reports **1** After completion of the approval test, the manufacturer is to produce a report of the approval test and is to submit it to the Society (branch office concerned) upon receiving confirmation by the Society's Surveyor.	**1.4.5 Test Reports** **1** After completion of the approval test, the manufacturer is to produce a report of the approval test and is to submit three copies to the Society (branch office concerned) upon receiving confirmation by the Society's Surveyor.	To delete the specification of the number of copies due to digitization
Table 2.1-4 Impact Test Temperature for Rolled Steel for Hull (Table is omitted.)	Table 1.1-4 Impact Test Temperature for Rolled Steel for Hull (Table is omitted.)	Figure and table numbers have been changed due to reorganization
Table 2.1-5 Impact Test Temperature for High Strength Rolled Steel for Offshore Structures (Table is omitted.)	Table 1.1-5 Impact Test Temperature for High Strength Rolled Steel for Offshore Structures (Table is omitted.)	Figure and table numbers have been changed due to reorganization
Table 2.1-6 Test Samples for Weldability Tests (Table is omitted.) Notes: (1) (Omitted) (2) PWHT is to be carried out in accordance with the condition specified in **Table 2.1-7**. ((3) to (5) are omitted.)	Table 1.1-6 Test Samples for Weldability Tests (Table is omitted.) Notes: (1) (Omitted) (2) PWHT is to be carried out in accordance with the condition specified in **Table 1.1-7**. ((3) to (5) are omitted.)	Figure and table numbers have been changed due to reorganization
Table 2.1-7 Post Weld Heat Treatment Procedures for High Strength Rolled Steels for Offshore Structures (Table is omitted.)	Table 1.1-7 Post Weld Heat Treatment Procedures for High Strength Rolled Steels for Offshore Structures (Table is omitted.)	Figure and table numbers have been changed due to reorganization
Table 2.1-8 Maximum Hardness of Welding Hardness Test (Table is omitted.)	Table 1.1-8 Maximum Hardness of Welding Hardness Test (Table is omitted.)	Figure and table numbers have been changed due to reorganization

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Table 2.1-9 Selection of *CTOD* Test Specimens for Weldability Tests of High Strength Rolled Steels for Offshore Structurers (Table is omitted.)	Table 1.1-9 Selection of *CTOD* Test Specimens for Weldability Tests of High Strength Rolled Steels for Offshore Structurers (Table is omitted.)	Figure and table numbers have been changed due to reorganization
Fig 2.1-2 Examples of Notch Locations for Butt Welding Impact Tests (Figure is omitted)	Fig 1.1-2 Examples of Notch Locations for Butt Welding Impact Tests (Figure is omitted)	Figure and table numbers have been changed due to reorganization
1.5 Approval	**1.5 Approval**	
1.5.1 Notification of Approval	**1.5.1 Notification of Approval**	
3 Notwithstanding **-1** above, for the corrosion resistant steel for cargo oil tanks specified in **3.13, Part K of the Rules for the Survey and Construction of Steel Ships**, the Society grants approval of the manufacturing process for corrosion resistant steel for cargo oil tanks which have been deemed appropriate on the basis of the reports of the Surveyor and documents submitted in accordance with requirements in **1.2** through **1.4**. In this case, a "Certificate of Approval" is published including the name of works, kind of corrosion resistant steel for cargo oil tanks, term of validity of approval etc. and at least the following items are described in "Particulars of Approval Conditions".	**3** Notwithstanding **-1** above, for the corrosion resistant steel for cargo oil tanks specified in **3.13, Part K of the Rules for the Survey and Construction of Steel Ships**, the Society grants approval of the manufacturing process for corrosion resistant steel for cargo oil tanks which have been deemed appropriate on the basis of the reports of the Surveyor and documents submitted in accordance with requirements in **1.2** through **1.4**. In this case, a "Type Approval Certificate" is published including the name of works, kind of corrosion resistant steel for cargo oil tanks, term of validity of approval etc. and at least the following items are described in "Particulars of Approval Conditions".	Terminology alignment
((1) to (5) are omitted.)	((1) to (5) are omitted.)	
1.5.2 Validity of Approval	**1.5.2 Validity of Approval**	
Valid term of the "Certificate of Approval" specified in **1.5.1-1** and **1.5.1-3** will be 5 *years* from the date of approval. In case when the renewal of approval is carried out in	Valid term of the "Certificate of Approval" specified in **1.5.1-1** and the "Type Approval Certificate" specified in **1.5.1-3** will be 5 *years* from the date of approval. In case when the	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
accordance with the requirements in **1.5.3**, valid term will be 5 *years* from the next day after the expiry date of the previous validity (hereinafter referred to as "date of renewal").	renewal of approval is carried out in accordance with the requirements in **1.5.3**, valid term will be 5 *years* from the next day after the expiry date of the previous validity (hereinafter referred to as "date of renewal").	
1.5.3 Renewal of Approval **1** In case of application for renewal of approval, the applicant is to submit a "Certificate of Approval" (copy) and the data showing actual manufacturing records (for example, chemical composition, mechanical properties, brittle crack arrest properties (in the case of steels considered to have the brittle crack arrest properties specified in **3.12, Part K of the Rules**) and thickness or dimension expressed in the form of histogram or statistics for each heat treatment) of the rolled steels or semi-finished products within the specific period together with the appropriate application form (**Form 1-1**) (in the case of corrosion resistant steel for cargo oil tanks, **Form 1-2**).	**1.5.3 Renewal of Approval** **1** In case of application for renewal of approval, the applicant is to submit a "Certificate of Approval" (copy) (in the case of the corrosion resistant steel for cargo oil tanks specified in **3.13, Part K of the Rules for the Survey and Construction of Steel Ships**, the "Type Approval Certificate" (copy)) and three copies of the data showing actual manufacturing records (for example, chemical composition, mechanical properties, brittle crack arrest properties (in the case of steels considered to have the brittle crack arrest properties specified in **3.12, Part K of the Rules**) and thickness or dimension expressed in the form of histogram or statistics for each heat treatment) of the rolled steels or semi-finished products within the specific period together with the appropriate application form (**Form 1-1**) (in the case of corrosion resistant steel for cargo oil tanks, **Form 1-2**).	Handling change To delete the specification of the number of copies due to digitization
3 The factory inspection specified in **-2** is to be completed within the valid term of "Certificate of Approval" in principle. However, for unavoidable circumstance, the factory inspection may be completed within a period of 3 *months* after the valid term upon the approval by the Society.	**3** The factory inspection specified in **-2** is to be completed within the valid term of "Certificate of Approval" or "Type Approval Certificate" in principle. However, for unavoidable circumstance, the factory inspection may be completed within a period of 3 *months* after the valid term upon the approval by the Society.	Terminology alignment
6 Manufacturers whose approval is renewed are to return the old "Certificate of Approval" to the Society as soon as possible after receiving the new certificate and the term of validity of the old certificate expires.	**6** Manufacturers whose approval is renewed are to return the old "Certificate of Approval" or the "Type Approval Certificate" to the Society as soon as possible after receiving the new certificate and the term of validity of the old certificate	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
	expires.	
1.5.4 Changes in the Approved Content **1** In case of changes in the approved content such as those given in the following **(1)** through **(9)** are occurred, in response to the content of changes, documents corresponding to the requirements in **1.2.2** are to be submitted to the Society, in addition to the appropriate application form (**Form 1-1**) and a "Certificate of Approval" (copy).	**1.5.4 Changes in the Approved Content** **1** In case of changes in the approved content such as those given in the following **(1)** through **(9)** are occurred, in response to the content of changes, three copies of documents corresponding to the requirements in **1.2.2** are to be submitted to the Society, in addition to a copy of the appropriate application form (**Form 1-1**) and a "Certificate of Approval" (copy).	To delete the specification of the number of copies due to digitization
((1) to (9) are omitted.)	((1) to (9) are omitted.)	
2 For the corrosion resistant steel for cargo oil tanks specified in **3.13, Part K of the Rules for the Survey and Construction of Steel Ships**, in case of changes in the approved content such as those given in the above **-1(1)** through **(9)** and following **(1)** and **(2)** are occurred, in response to the content of changes, each of documents corresponding to the requirements in **1.2.2** are to be submitted to the Society, in addition to the appropriate application form (**Form 1-2**) for Changes in the Approved Content of Manufacturing Process of Corrosion Resistant Steel for Cargo Oil Tanks" and the "Certificate of Approval" (copy).	**2** For the corrosion resistant steel for cargo oil tanks specified in **3.13, Part K of the Rules for the Survey and Construction of Steel Ships**, in case of changes in the approved content such as those given in the above **-1(1)** through **(9)** and following **(1)** and **(2)** are occurred, in response to the content of changes, three copies each of documents corresponding to the requirements in **1.2.2** are to be submitted to the Society, in addition to a copy of the appropriate application form (**Form 1-2**) for Changes in the Approved Content of Manufacturing Process of Corrosion Resistant Steel for Cargo Oil Tanks" and the "Type Approval Certificate" (copy).	Terminology alignment
((1) and (2) are omitted.)	((1) and (2) are omitted.)	
4 The Society is to examine the submitted data specified in **-1** or **-2** and reports of factory inspection and approval test specified in **-3**, and if the Society considers them appropriate, is to approve the changes in the approved content. In this case, as a rule, the validity of the "Certificate of Approval" specified in **-1** or **-2** are not changed.	**4** The Society is to examine the submitted data specified in **-1** or **-2** and reports of factory inspection and approval test specified in **-3**, and if the Society considers them appropriate, is to approve the changes in the approved content. In this case, as a rule, the validity of the "Certificate of Approval" specified in **-1** or the "Type Approval Certificate" specified in **-2** are not changed.	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
5 Manufacturers whose request for changes in approved content is accepted are to return the old "Certificate of Approval" and the relevant "Particulars of Approval Conditions" to the Society as soon as possible after receiving the new certificate.	**5** Manufacturers whose request for changes in approved content is accepted are to return the old "Certificate of Approval" or old "Type Approval Certificate" and the relevant "Particulars of Approval Conditions" to the Society as soon as possible after receiving the new certificate.	Terminology alignment
1.5.5 Revocation of Approval In case any of the following **(1)** through **(5)** is relevant, the Society may revoke approval of the manufacturing process based on the requirements in this Chapter and give notice of the revocation to the manufacturer. The manufacturer which noticed the approval is withdrawn is to return "Certificate of Approval" and "Particulars of Approval Conditions" in question to the Society. ((1) to (5) are omitted.)	**1.5.5 Revocation of Approval** In case any of the following **(1)** through **(5)** is relevant, the Society may revoke approval of the manufacturing process based on the requirements in this Chapter and give notice of the revocation to the manufacturer. The manufacturer which noticed the approval is withdrawn is to return "Certificate of Approval" or "Type Approval Certificate" and "Particulars of Approval Conditions" in question to the Society. ((1) to (5) are omitted.)	Terminology alignment
Chapter 1A WELDABILITY CONFIRMATION OF ROLLED STEELS FOR HULL	**Chapter 1A WELDABILITY CONFIRMATION OF ROLLED STEELS FOR HULL**	
1A.1 General	**1A.1 General**	
1A.1.1 Scope **1** (Omitted) **2** (Omitted) **3** The time of the weldability confirmation may be different from that of approval of manufacturing process specified in **Chapter 2** in this part. **4** The requirements provided in **Chapter 2** in this part are applicable unless otherwise specified in this chapter.	**1A.1.1 Scope** **1** (Omitted) **2** (Omitted) **3** The time of the weldability confirmation may be different from that of approval of manufacturing process specified in **Chapter 1** in this part. **4** The requirements provided in **Chapter 1** in this part are applicable unless otherwise specified in this chapter.	Terminology alignment To align with the structure of other rules, the General Provisions are designated as Part 1, and the former Parts 1 to 4 are reorganized accordingly.

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
1A.2 Application of the Weldability Confirmation	**1A.2 Application of the Weldability Confirmation**	Terminology alignment
1A.2.1 Application Form Manufacturer who applies for the weldability confirmation of the rolled steels is to submit the appropriate application form (**Form 1-3**) filled in with required data and information to the Society (branch office concerned).	**1A.2.1 Application Form** Manufacturer who applies for the weldability confirmation of the rolled steels is to submit a copy of the appropriate application form (**Form 1-3**) filled in with required data and information to the Society (branch office concerned).	To delete the specification of the number of copies due to digitization
1A.2.2 Documents to be Submitted **1** Each of the documents given in **(1)** and **(2)** are to be submitted together with the application form specified in **1A.2.1**. ((1) and (2) are omitted.)	**1A.2.2 Documents to be Submitted** **1** Three copies each of the documents given in **(1)** and **(2)** are to be submitted together with the application form specified in **1A.2.1**. ((1) and (2) are omitted.)	To delete the specification of the number of copies due to digitization
1A.4 Confirmation Test	**1A.4 Confirmation Test**	
1A.4.5 Test Reports **1** After completion of the confirmation test, the manufacturer is to produce a report of the confirmation test and is to submit it to the Society (branch office concerned) upon receiving confirmation by the Society's Surveyor.	**1A.4.5 Test Reports** **1** After completion of the confirmation test, the manufacturer is to produce a report of the confirmation test and is to submit three copies to the Society (branch office concerned) upon receiving confirmation by the Society's Surveyor.	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Chapter 1B APPROVAL OF MANUFACTURING PROCESS OF SEMI-FINISHED PRODUCTS	**Chapter 1B APPROVAL OF MANUFACTURING PROCESS OF SEMI-FINISHED PRODUCTS**	Terminology alignment
1B.2 Approval Application	**1B.2 Approval Application**	
1B.2.1 Approval Application Form Manufacturer who applies for the approval of the manufacturing process of semi-finished products is to submit the appropriate application form (**Form 1-4**) filled in with required data and information to the Society (branch office concerned).	**1B.2.1 Approval Application Form** Manufacturer who applies for the approval of the manufacturing process of semi-finished products is to submit a copy of the appropriate application form (**Form 1-4**) filled in with required data and information to the Society (branch office concerned).	To delete the specification of the number of copies due to digitization
1B.2.2 Documents to be Submitted **1** Each of the documents given in **(1)** and **(2)** are to be submitted together with the appropriate application form specified in **1B.2.1**. ((1) and (2) are omitted.)	**1B.2.2 Documents to be Submitted** **1** Three copies each of the documents given in **(1)** and **(2)** are to be submitted together with the appropriate application form specified in **1B.2.1**. ((1) and (2) are omitted.)	To delete the specification of the number of copies due to digitization
1B.4 Approval Test	**1B.4 Approval Test**	
1B.4.4 Test Reports **1** After completion of the approval test, the manufacturer is to produce a report of the approval test and is to submit it to the Society (branch office concerned) upon receiving confirmation by the Society's Surveyor.	**1B.4.4 Test Reports** **1** After completion of the approval test, the manufacturer is to produce a report of the approval test and is to submit three copies to the Society (branch office concerned) upon receiving confirmation by the Society's Surveyor.	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
1B.5 Approval **1B.5.3 Renewal of Approval** **1** In case of application for renewal of approval, the applicant is to submit a "Certificate of Approval" (copy) and of the data showing actual manufacturing records (for example, chemical composition, mechanical properties and thickness or dimension expressed in the form of histogram or statistics) of the semi-finished products within the specific period together with the appropriate application form (**Form 1-4**). **1B.5.4 Changes in the Approved Content** **1** In case of changes in the approved content such as those given in the following **(1)** through **(5)** are occurred, in response to the content of changes, documents corresponding to the requirements in **1B.2.2** are to be submitted to the Society, in addition to the appropriate application form (**Form 1-4**) and a "Certificate of Approval" (copy). ((1) to (5) are omitted.)	**1B.5 Approval** **1B.5.3 Renewal of Approval** **1** In case of application for renewal of approval, the applicant is to submit a "Certificate of Approval" (copy) and three copies of the data showing actual manufacturing records (for example, chemical composition, mechanical properties and thickness or dimension expressed in the form of histogram or statistics) of the semi-finished products within the specific period together with the appropriate application form (**Form 1-4**). **1B.5.4 Changes in the Approved Content** **1** In case of changes in the approved content such as those given in the following **(1)** through **(5)** are occurred, in response to the content of changes, three copies of documents corresponding to the requirements in **1B.2.2** are to be submitted to the Society, in addition to a copy of the appropriate application form (**Form 1-4**) and a "Certificate of Approval" (copy). ((1) to (5) are omitted.)	To delete the specification of the number of copies due to digitization To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Chapter 2 APPROVAL OF MANUFACTURING PROCESS OF STEEL PIPES	**Chapter 2 APPROVAL OF MANUFACTURING PROCESS OF STEEL PIPES**	Terminology alignment
2.2 Approval Application	**2.2 Approval Application**	
2.2.1 Approval Application Form Manufacturers who applies for approval of the manufacturing process of steel pipes are to submit the appropriate application form (**Form 1-5**) filled in with required data and information to the Society.	**2.2.1 Approval Application Form** Manufacturers who applies for approval of the manufacturing process of steel pipes are to submit a single copy of the appropriate application form (**Form 1-5**) filled in with required data and information to the Society.	Terminology alignment To delete the specification of the number of copies due to digitization
2.2.2 Data to be Submitted **1** Each of the drawings and documents given in **(1)** through **(8)** are to be submitted together with the appropriate application form specified in **2.2.1**. ((1) to (8) are omitted.)	**2.2.2 Data to be Submitted** **1** Three copies each of the drawings and documents given in **(1)** through **(8)** are to be submitted together with the appropriate application form specified in **2.2.1**. ((1) to (8) are omitted.)	To delete the specification of the number of copies due to digitization
2.4 Approval Test	**2.4 Approval Test**	
2.4.2 Details of Test **1** Items of the approval test are to be as given in **Table 2.2-1**.	**2.4.2 Details of Test** **1** Items of the approval test are to be as given in **Table 1.2-1**.	Figure and table numbers have been changed due to reorganization
2.4.4 Test Records **1** After completion of the approval test, the manufacturer is to produce a record of the approval test and is to submit it to the Society upon receiving confirmation by the Society's Surveyor.	**2.4.4 Test Records** **1** After completion of the approval test, the manufacturer is to produce a record of the approval test and is to submit three copies to the Society upon receiving confirmation by the Society's Surveyor.	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Table 2.2-1 Approval Test Items for Steel Pipes (Table is omitted.)	Table 1.2-1 Approval Test Items for Steel Pipes (Table is omitted.)	Figure and table numbers have been changed due to reorganization
2.5 Approval	**2.5 Approval**	
2.5.3 Renewal of Approval **1** In case of application for renewal of approval, the applicant is to submit a "Certificate of Approval" (copy) and the data showing actual manufacturing records (for example, chemical composition, mechanical properties, outer diameter and thickness expressed in the form of histogram or statistics) of the steel pipes within the specific period together with the appropriate application from (**Form 1-5**).	**2.5.3 Renewal of Approval** **1** In case of application for renewal of approval, the applicant is to submit a "Certificate of Approval" (copy) and three copies of the data showing actual manufacturing records (for example, chemical composition, mechanical properties, outer diameter and thickness expressed in the form of histogram or statistics) of the steel pipes within the specific period together with the appropriate application from (**Form 1-5**).	To delete the specification of the number of copies due to digitization
2.5.4 Changes in the Approved Content **1** In case of changes in the approved content such as those given in the following **(1)** through **(9)** are occurred, in response to the content of changes, documents corresponding to the requirements in **2.2.2** are to be submitted to the Society, in addition to the appropriate application form (**Form 1-5**) and a "Certificate of Approval" (copy). ((1) to (9) are omitted.)	**2.5.4 Changes in the Approved Content** **1** In case of changes in the approved content such as those given in the following **(1)** through **(9)** are occurred, in response to the content of changes, three copies of documents corresponding to the requirements in **2.2.2** are to be submitted to the Society, in addition to one copy of the appropriate application form (**Form 1-5**) and a "Certificate of Approval" (copy). ((1) to (9) are omitted.)	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Chapter 3 APPROVAL OF MANUFACTURING PROCESS OF STEEL CASTINGS AND STEEL FORGINGS	**Chapter 3 APPROVAL OF MANUFACTURING PROCESS OF STEEL CASTINGS AND STEEL FORGINGS**	
3.1 General	**3.1 General**	
3.1.3 Classification of Materials The castings and forgings, to which this chapter is to be applied, are classified as shown in the **Table 2.3-1**.	**3.1.3 Classification of Materials** The castings and forgings, to which this chapter is to be applied, are classified as shown in the **Table 1.3-1**.	Figure and table numbers have been changed due to reorganization
3.2 Application Procedure	**3.2 Application Procedure**	
3.2.1 Application Manufacturer who applies for the approval is to submit the appropriate application form (**Form 1-6**) filled in with the required items to the Society (branch office concerned).	**3.2.1 Application** Manufacturer who applies for the approval is to submit a single copy of the appropriate application form (**Form 1-6**) filled in with the required items to the Society (branch office concerned).	To delete the specification of the number of copies due to digitization
3.2.2 Data to be Submitted **1** The reference data listed in **(1)** through **(7)** below, are to be submitted together with the application form specified in **3.2.1**. ((1) to (7) are omitted.)	**3.2.2 Data to be Submitted** **1** The reference data listed in **(1)** through **(7)** below, each three copies, are to be submitted together with the application form specified in **3.2.1**. ((1) to (7) are omitted.)	To delete the specification of the number of copies due to digitization
Table 2.3-1 Kinds of Materials and Finished Products (Table is omitted.)	Table 1.3-1 Kinds of Materials and Finished Products (Table is omitted.)	Figure and table numbers have been changed due to reorganization

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
3.4 Approval Test **3.4.3 Details of Test** Details of the tests for those listed in **3.4.1(1)** are as follows. ((1) and (2) are omitted.) (3) Tests The tests consist of the following items are to be carried out on the test samples, as the standard practice: (a) Sulphur print test and macro-structure analysis (The specimens are to be taken from sections *A*-*A*, *B*-*B* and *C*-*C* specified in **Fig. 2.3-1**.) (b) Chemical composition analysis test (The specimens are to be taken from the positions asterisked in **Fig. 2.3-1**.) (c) Micro-structure analysis (The specimens are to be taken from the positions asterisked in **Fig. 2.3-1**.) (d) Hardness test (Positions in the vicinity of pin or journal surface. In the case of quenched and tempered steels, hardness distribution from the surface to the shaft centre.) (e) Tensile test and impact test (or bend test)(Tensile test specimens are to be taken as specified in **Fig. 2.3-2**, and impact test (or bend test) specimens are to be taken as specified in **Fig. 2.3-3**, as the standard practice.) (f) Non-destructive testing (The requirements specified in **5.1.10** or **6.1.10, Part K of the Rules for the Survey and Construction of Steel**	**3.4 Approval Test** **3.4.3 Details of Test** Details of the tests for those listed in **3.4.1(1)** are as follows. ((1) and (2) are omitted.) (3) Tests The tests consist of the following items are to be carried out on the test samples, as the standard practice: (a) Sulphur print test and macro-structure analysis (The specimens are to be taken from sections *A*-*A*, *B*-*B* and *C*-*C* specified in **Fig. 1.3-1**.) (b) Chemical composition analysis test (The specimens are to be taken from the positions asterisked in **Fig. 1.3-1**.) (c) Micro-structure analysis (The specimens are to be taken from the positions asterisked in **Fig. 1.3-1**.) (d) Hardness test (Positions in the vicinity of pin or journal surface. In the case of quenched and tempered steels, hardness distribution from the surface to the shaft centre.) (e) Tensile test and impact test (or bend test)(Tensile test specimens are to be taken as specified in **Fig. 1.3-2**, and impact test (or bend test) specimens are to be taken as specified in **Fig. 1.3-3**, as the standard practice.) (f) Non-destructive testing (The requirements specified in **5.1.10** or **6.1.10, Part K of the Rules for the Survey and Construction of Steel**	Figure and table numbers have been changed due to reorganization

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Ships apply correspondingly.) (g) Other tests deemed necessary by the Society	**Ships** apply correspondingly.) (g) Other tests deemed necessary by the Society	
Fig. 2.3-1 Sampling Positions (Figure is omitted.)	Fig. 1.3-1 Sampling Positions (Figure is omitted.)	Figure and table numbers have been changed due to reorganization
Fig. 2.3-2 Sampling Positions of Tensile Test Specimens (Figure is omitted.)	Fig. 1.3-2 Sampling Positions of Tensile Test Specimens (Figure is omitted.)	Figure and table numbers have been changed due to reorganization
Fig. 2.3-3 Sampling Positions of Impact Test (or Bend Test) Specimens (Figure is omitted.)	Fig. 1.3-3 Sampling Positions of Impact Test (or Bend Test) Specimens (Figure is omitted.)	Figure and table numbers have been changed due to reorganization
3.4.5 Test Records **1** After completion of the approval test, the manufacturer is to produce records of approval test, and is to submit it to the Society (branch office concerned) upon receiving confirmation by the Society's Surveyor.	**3.4.5 Test Records** **1** After completion of the approval test, the manufacturer is to produce records of approval test, and is to submit three copies to the Society (branch office concerned) upon receiving confirmation by the Society's Surveyor.	To delete the specification of the number of copies due to digitization
3.5 Approval	**3.5 Approval**	
3.5.3 Renewal of Approval and Changes in the Approved Content **2** In case of application for renewal of approval specified in **-1**, data showing actual manufacturing records for the material classification (for example, chemical composition and mechanical properties expressed in the form of histogram of statistics) within the specific period are to be included. In this case, the Society conducts the factory inspection.	**3.5.3 Renewal of Approval and Changes in the Approved Content** **2** In case of application for renewal of approval specified in **-1**, three copies of data showing actual manufacturing records for the material classification (for example, chemical composition and mechanical properties expressed in the form of histogram of statistics) within the specific period are to be included. In this case, the Society conducts the factory	To delete the specification of the number of copies due to digitization

Amended	Original	Remarks
	inspection.	
Chapter 4 APPROVAL OF MANUFACTURING PROCESS OF CRANKSHAFTS UNDER SPECIAL REQUIREMENTS	**Chapter 4 APPROVAL OF MANUFACTURING PROCESS OF CRANKSHAFTS UNDER SPECIAL REQUIREMENTS**	Terminology alignment
4.2 Application Procedures	**4.2 Application Procedures**	
4.2.1 Data to be Submitted The manufacturer who applies for an approval of the manufacturing process mentioned in **4.1.1-1(2)** is to submit the data showing the details of surface treatment in addition to those listed in **3.2.2-1**.	**4.2.1 Data to be Submitted** The manufacturer who applies for an approval of the manufacturing process mentioned in **4.1.1-1(2)** is to submit three copies of the data showing the details of surface treatment in addition to those listed in **3.2.2-1**.	To delete the specification of the number of copies due to digitization
4.3 Approval Tests	**4.3 Approval Tests**	
4.3.1 General Approval tests are to be carried out in accordance with **3.4** to adopt the manufacturing process mentioned in **4.1.1-1(1)** or **(2)**. In this regard, the requirements in **3.4.3** are to be applied as follows. (1) Approval test for special forged crankshafts The test items listed below are to be added to those listed in **3.4.3(3)**. (a) Microscopic testing method for the non-metallic inclusions (as per *JIS G* 0555) (The specimens are to be taken from the positions asterisked in **Fig.**	**4.3.1 General** Approval tests are to be carried out in accordance with **3.4** to adopt the manufacturing process mentioned in **4.1.1-1(1)** or **(2)**. In this regard, the requirements in **3.4.3** are to be applied as follows. (1) Approval test for special forged crankshafts The test items listed below are to be added to those listed in **3.4.3(3)**. (a) Microscopic testing method for the non-metallic inclusions (as per *JIS G* 0555) (The specimens are to be taken from the positions asterisked in	Figure and table numbers have been changed due to reorganization

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
2.3-1.) (b) Bending fatigue test on actual crank throw The number of test specimens is to be at least 2. (c) Rotational bending fatigue test on small-size test specimens (Dia. 10～20 *mm*) The number of test specimens is to be not less than 10 and they are to be taken from the positions described in **Fig. 2.4-1** as the standard practice. In cases of approval for carbon steel forgings or where previous data on this test is available, this test may be omitted subject to approval by the Society. (2) (Omitted) Fig. 2.4-1 Sampling Positions of Bend Test Specimens (Figure is omitted.)	**Fig. 1.3-1**.) (b) Bending fatigue test on actual crank throw The number of test specimens is to be at least 2. (c) Rotational bending fatigue test on small-size test specimens (Dia. 10～20 *mm*) The number of test specimens is to be not less than 10 and they are to be taken from the positions described in **Fig. 1.4-1** as the standard practice. In cases of approval for carbon steel forgings or where previous data on this test is available, this test may be omitted subject to approval by the Society. (2) (Omitted) Fig. 1.4-1 Sampling Positions of Bend Test Specimens (Figure is omitted.)	
Chapter 5 APPROVAL OF MANUFACTURING PROCESS OF ALUMINIUM ALLOYS	**Chapter 5 APPROVAL OF MANUFACTURING PROCESS OF ALUMINIUM ALLOYS**	Terminology alignment
5.2 Approval Application	**5.2 Approval Application**	
5.2.1 Approval Application Form Manufactures who applies for approval of the manufacturing process of aluminium alloys are to submit the appropriate application form (**Form 1-7**) filled in with required data and information to the Society.	**5.2.1 Approval Application Form** Manufactures who applies for approval of the manufacturing process of aluminium alloys are to submit a single copy of the appropriate application form (**Form 1-7**) filled in with required data and information to the Society.	Terminology alignment To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
5.2.2 Data to be Submitted **1** Each of the drawings and documents given in **(1)** through **(8)** are to be submitted together with the appropriate application form specified in **1.2.1**. ((1) to (8) are omitted.)	**5.2.2 Data to be Submitted** **1** Three copies each of the drawings and documents given in **(1)** through **(8)** are to be submitted together with the appropriate application form specified in **1.2.1**. ((1) to (8) are omitted.)	To delete the specification of the number of copies due to digitization
5.4 Approval Test	**5.4 Approval Test**	
5.4.2 Details of Test **1** (Omitted) **2** The approval test items, method and evaluation criteria of the approval test are to be as given in **Table 2.5-1** and **Table 2.5-2** respectively.	**5.4.2 Details of Test** **1** (Omitted) **2** The approval test items, method and evaluation criteria of the approval test are to be as given in **Table 1.5-1** and **Table 1.5-2** respectively.	Figure and table numbers have been changed due to reorganization
5.4.4 Test Records **1** After completion of the approval test, the manufacturer is to produce a record of the approval test and is to submit it to the Society upon receiving confirmation by the Society's Surveyor.	**5.4.4 Test Records** **1** After completion of the approval test, the manufacturer is to produce a record of the approval test and is to submit three copies to the Society upon receiving confirmation by the Society's Surveyor.	To delete the specification of the number of copies due to digitization
Table 2.5-1 Approval Test Items for Aluminium Alloys (Table is omitted.)	Table 1.5-1 Approval Test Items for Aluminium Alloys (Table is omitted.)	Figure and table numbers have been changed due to reorganization
Table 2.5-2 Approval Testing Method and Acceptance Criteria (Table is omitted.)	Table 1.5-2 Approval Testing Method and Acceptance Criteria (Table is omitted.)	Figure and table numbers have been changed due to reorganization

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
5.5 Approval **5.5.3 Renewal of Approval** **1** In case of application for renewal of approval, the applicant is to submit a "Certificate of Approval" (copy) and the data showing actual manufacturing records (for example, chemical composition, mechanical properties for each grade and thickness expressed in the form of histogram or statistics) of the aluminium alloys within the specific period together with the appropriate application form (**Form 1-7**). **5.5.4 Changes in the Approved Content** **1** In case of changes in the approved content such as those given in the following **(1)** through **(9)** is occurred, in response to the content of changes, documents corresponding to the requirements in **5.2.2** are to be submitted to the Society, in addition to the appropriate application form (**Form 1-7**) and a "Certificate of Approval" (copy). ((1) to (9) are omitted.)	**5.5 Approval** **5.5.3 Renewal of Approval** **1** In case of application for renewal of approval, the applicant is to submit a "Certificate of Approval" (copy) and three copies of the data showing actual manufacturing records (for example, chemical composition, mechanical properties for each grade and thickness expressed in the form of histogram or statistics) of the aluminium alloys within the specific period together with the appropriate application form (**Form 1-7**). **5.5.4 Changes in the Approved Content** **1** In case of changes in the approved content such as those given in the following **(1)** through **(9)** is occurred, in response to the content of changes, three copies of documents corresponding to the requirements in **5.2.2** are to be submitted to the Society, in addition to one copy of the appropriate application form (**Form 1-7**) and a "Certificate of Approval" (copy). ((1) to (9) are omitted.)	To delete the specification of the number of copies due to digitization To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
Chapter 6 APPROVAL OF MANUFACTURING PROCESS OF PROPELLER CASTINGS	**Chapter 6 APPROVAL OF MANUFACTURING PROCESS OF PROPELLER CASTINGS**	Terminology alignment
6.2 Application Procedures	**6.2 Application Procedures**	
6.2.2 Data to be Submitted **1** Each of the documents given in **(1)** through **(6)** are to be submitted together with the appropriate application form specified in **6.2.1**. ((1) to (6) are omitted.)	**6.2.2 Data to be Submitted** **1** Three copies each of the documents given in **(1)** through **(6)** are to be submitted together with the appropriate application form specified in **6.2.1**. ((1) to (6) are omitted.)	To delete the specification of the number of copies due to digitization
Chapter 7 APPROVAL OF MANUFACTURING PROCESS OF ALUMINIUM ALLOY SEAMLESS PIPES	**Chapter 7 APPROVAL OF MANUFACTURING PROCESS OF ALUMINIUM ALLOY SEAMLESS PIPES**	Terminology alignment
7.2 Approval Application	**7.2 Approval Application**	
7.2.1 Approval Application Form Manufacturers who apply for approval of the manufacturing process of aluminium alloy seamless pipes are to submit an application form filled in with the required data and information to the Society.	**7.2.1 Approval Application Form** Manufacturers who apply for approval of the manufacturing process of aluminium alloy seamless pipes are to submit a single copy of an application form filled in with the required data and information to the Society.	To delete the specification of the number of copies due to digitization
7.2.2 Data to be Submitted **1** Each of the drawings and documents given in **(1)** through **(8)** are to be submitted together with the appropriate	**7.2.2 Data to be Submitted** **1** Three copies each of the drawings and documents given in **(1)** through **(8)** are to be submitted together with the	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
application form specified in **7.2.1**. ((1) to (8) are omitted.)	appropriate application form specified in **7.2.1**. ((1) to (8) are omitted.)	
7.4 Approval Tests	**7.4 Approval Tests**	
7.4.2 Test Details Approval tests for each of aluminium alloy seamless pipes are to be performed for each test item given in **Table 2.7-1** and the test procedure and judgement standard are to be accordance with **Table 2.7-2**. However, additional test pieces and test items as well as the submission of proper technical information may be requested when deemed necessary by Society.	**7.4.2 Test Details** Approval tests for each of aluminium alloy seamless pipes are to be performed for each test item given in **Table 1.7-1** and the test procedure and judgement standard are to be accordance with **Table 1.7-2**. However, additional test pieces and test items as well as the submission of proper technical information may be requested when deemed necessary by Society.	Figure and table numbers have been changed due to reorganization
7.4.4 Test Reports **1** Upon completion of approval test, the manufacturer is to produce a record of the approval test , have the record verified by the Society surveyor and then submit it to the Society.	**7.4.4 Test Reports** **1** Upon completion of approval test, the manufacturer is to produce a record of the approval test , have the record verified by the Society surveyor and then submit three copies to the Society.	To delete the specification of the number of copies due to digitization
Table 2.7-1 Approval Test Items for Aluminium Alloy Seamless Pipes (Table is omitted.)	Table 1.7-1 Approval Test Items for Aluminium Alloy Seamless Pipes (Table is omitted.)	Figure and table numbers have been changed due to reorganization
Table 2.7-2 Approval Testing Method and Acceptance Criteria (Table is omitted.)	Table 1.7-2 Approval Testing Method and Acceptance Criteria (Table is omitted.)	Figure and table numbers have been changed due to reorganization

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
7.5 Approval	**7.5 Approval**	
7.5.3 Renewal of Approval **1** In case of application for renewal of approval, the applicant is to submit a "Certificate of Approval" (copy) and the data showing actual manufacturing records (for example, chemical composition, mechanical properties, outer diameter and thickness expressed in the form of histogram or statistics for each heat treatment) of the aluminium alloy seamless pipes within the specific period together with the appropriate application form.	**7.5.3 Renewal of Approval** **1** In case of application for renewal of approval, the applicant is to submit a "Certificate of Approval" (copy) and three copies of the data showing actual manufacturing records (for example, chemical composition, mechanical properties, outer diameter and thickness expressed in the form of histogram or statistics for each heat treatment) of the aluminium alloy seamless pipes within the specific period together with the appropriate application form.	To delete the specification of the number of copies due to digitization
7.5.4 Changes in the Approved Content **1** In case of changes in the approved content such as those given in the following **(1)** through **(7)** is occurred, in response to the content of changes, documents corresponding to the requirements in **7.2.2** are to be submitted to the Society, in addition to the "Certificate of Approval". ((1) to (7) are omitted.)	**7.5.4 Changes in the Approved Content** **1** In case of changes in the approved content such as those given in the following **(1)** through **(7)** is occurred, in response to the content of changes, three copies of documents corresponding to the requirements in **7.2.2** are to be submitted to the Society, in addition to a copy of the "Certificate of Approval". ((1) to (7) are omitted.)	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
Part 3 EQUIPMENT	**Part 2 EQUIPMENT**	
Chapter 1 APPROVAL OF MANUFACTURING PROCESS OF ANCHORS	**Chapter 1 APPROVAL OF MANUFACTURING PROCESS OF ANCHORS**	
1.2 Approval Application	**1.2 Approval Application**	
1.2.1 Approval Application Forms **1** Manufacturers who apply for the approval of the manufacturing process of anchor are to submit a copy of the appropriate application form (**Form 2-1**) filled in with the required data and information to the Society (branch office concerned).	**1.2.1 Approval Application Forms** **1** Manufacturers who apply for the approval of the manufacturing process of anchor are to submit the appropriate application form (**Form 2-1**) filled in with the required data and information to the Society (branch office concerned).	To delete the specification of the number of copies due to digitization
1.2.2 Documents to be Submitted Each of the documents listed below are to be submitted together with the appropriate application form specified in **1.2.1**. ((1) to (8) are omitted.)	**1.2.2 Documents to be Submitted** Three copies each of the documents listed below are to be submitted together with the appropriate application form specified in **1.2.1**. ((1) to (8) are omitted.)	To delete the specification of the number of copies due to digitization
1.5 Approval	**1.5 Approval**	
1.5.3 Renewal of Approval and Changes in the Approved Content **1** In cases where changes have been made to the approved content of the “Certificate of Approval” specified in **1.5.1**, the applicant is to apply for renewal of approval in	**1.5.3 Renewal of Approval and Changes in the Approved Content** **1** In cases where changes have been made to the approved content of the “Certificate of Approval” specified in **1.5.1**, the applicant is to apply for renewal of approval in	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
accordance with the requirements in **1.2**. In such cases, the "Certificate of Approval" and the documents specified in **1.2.2** are to be submitted together with the appropriate application form (**Form 2-1**). However, the data to be submitted may be limited to reference data on the changes. **2** In the case of application for renewal of approval as specified in **-1**, three sets of data are to be submitted. These data sets are to include an accurate record of all manufacturing that has been performed since the last "Certificate of Approval" was issued. In such cases, the Society will conduct a factory inspection if needed.	accordance with the requirements in **1.2**. In such cases, a copy of the "Certificate of Approval" and the documents specified in **1.2.2** are to be submitted together with the appropriate application form (**Form 2-1**). However, the data to be submitted may be limited to reference data on the changes. **2** In the case of application for renewal of approval as specified in **-1**, data are to be submitted. These data sets are to include an accurate record of all manufacturing that has been performed since the last "Certificate of Approval" was issued. In such cases, the Society will conduct a factory inspection if needed.	To delete the specification of the number of copies due to digitization
1.6 Approval of Manufacturing Process of High Holding Power Anchors	**1.6 Approval of Manufacturing Process of High Holding Power Anchors**	
1.6.1 High Holding Power Anchors The approval procedure for manufacturing of high holding power anchor (the anchor specified in **2.1.4-2, Part L of the Rules**, having the holding power two times or more of that of ordinary anchor, and if it is used without subjected to the reduction as specified in **14.3.1.2-6, Part 1, Part C of the Rules**, such anchor may not be dealt with as a high holding power anchor), is to be as follows in addition to the requirements specified in **1.2** through **1.5** of this chapter.	**1.6.1 High Holding Power Anchors** The approval procedure for manufacturing of high holding power anchor (the anchor specified in **2.1.4-2, Part L of the Rules**, having the holding power two times or more of that of ordinary anchor, and if it is used without subjected to the reduction as specified in **14.3.1.2-6, Part 1, Part C of the Rules**, such anchor may not be dealt with as a high holding power anchor), is to be as follows in addition to the requirements specified in **1.2** through **1.5** of this chapter.	Terminology alignment
(1) Application for approval Manufacturers who apply for the approval of the manufacturing processes of anchors are to submit the appropriate application form (**Form 2-1**) filled in with required data and information to the Society (branch office concerned)	(1) Application for approval Manufacturers who apply for the approval of the manufacturing processes of anchors are to submit a copy of the appropriate application form (**Form 2-1**) filled in with required data and information to the Society (branch office concerned)	To delete the specification of the number of copies due to digitization

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Amended	Original	Remarks
((2) to (4) are omitted.) (5) Submission of test reports The manufacturer, on completion of the tests, is to prepare test records, covering, at least, the following items in addition to those given in **1.4.2**, obtain the signature of the attended surveyor of the Society, and to submit them to the Society. ((a) to (e) are omitted.)	((2) to (4) are omitted.) (5) Submission of test reports The manufacturer, on completion of the tests, is to prepare test records, <u>in triplicate,</u> covering, at least, the following items in addition to those given in **1.4.2**, obtain the signature of the attended surveyor of the Society, and to submit them to the Society. ((a) to (e) are omitted.)	
1.8 Approval of Manufacturing Process of Anchors Used for Positioning Systems	**1.8 Approval of Manufacturing Process of Anchors Used for Positioning Systems**	
1.8.2 Approval Application Forms **1** Manufacturers who apply for the approval of the manufacturing process of anchor are to submit the appropriate application form (**Form 2-1**) filled in with the required data and information to the Society (branch office concerned).	**1.8.2 Approval Application Forms** **1** Manufacturers who apply for the approval of the manufacturing process of anchor are to submit <u>a copy of</u> the appropriate application form (**Form 2-1**) filled in with the required data and information to the Society (branch office concerned).	Terminology alignment To delete the specification of the number of copies due to digitization
1.8.3 Documents to be Submitted <u>E</u>ach of the documents listed in below are to be submitted together with the approval application forms specified in **1.8.2**. ((1) to (12) are omitted.)	**1.8.3 Documents to be Submitted** <u>Three copies e</u>ach of the documents listed in below are to be submitted together with the approval application forms specified in **1.8.2**. ((1) to (12) are omitted.)	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
Chapter 1A APPROVAL OF ANCHORS INTENDED FOR USE ON VESSELS OR FLOATING OFFSHORE FACILITIES FIXED OR POSITIONED AT SPECIFIC SEA AREAS FOR LONG PERIODS OF TIME	**Chapter 1A APPROVAL OF ANCHORS INTENDED FOR USE ON VESSELS OR FLOATING OFFSHORE FACILITIES FIXED OR POSITIONED AT SPECIFIC SEA AREAS FOR LONG PERIODS OF TIME**	
1A.2 Approval Application	**1A.2 Approval Application**	
1A.2.1 Approval Application Form Manufacturers who apply for the approval of anchor are to submit the appropriate application form (**Form 2-1A**) filled in with the required data and information to the Society (branch office concerned).	**1A.2.1 Approval Application Form** Manufacturers who apply for the approval of anchor are to submit a copy of the appropriate application form (**Form 2-1A**) filled in with the required data and information to the Society (branch office concerned).	To delete the specification of the number of copies due to digitization
1A.2.2 Documents to be Submitted Each of the documents given in below are to be submitted together with the appropriate application form specified in **1A.2.1**. ((1) to (4) are omitted.)	**1A.2.2 Documents to be Submitted** Three copies each of the documents given in below are to be submitted together with the appropriate application form specified in **1A.2.1**. ((1) to (4) are omitted.)	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
Chapter 2 APPROVAL OF MANUFACTURING PROCESS OF CHAINS	**Chapter 2 APPROVAL OF MANUFACTURING PROCESS OF CHAINS**	
2.2 Application Procedures	**2.2 Application Procedures**	
2.2.1 Application Procedures and Application Form The approval application procedures are to be in accordance with the following requirements: (1) The manufacturer who intends to newly manufacture chains is to submit the appropriate application form (**Form 2-2A**) filled with the information on the type of chains accompanied by the reference data, each in triplicate, stated in **2.2.2** to the Society. (2) The Society, upon examining the application for approval and the attached reference data stated in the above, is to give approval of the test procedure for approval and return them to the applicant.	**2.2.1 Application Procedures and Application Form** The approval application procedures are to be in accordance with the following requirements: (1) The manufacturer who intends to newly manufacture chains is to submit a single copy of the appropriate application form (**Form 2-2A**) filled with the information on the type of chains accompanied by the reference data, each in triplicate, stated in **2.2.2** to the Society. (2) The Society, upon examining the application for approval and the attached reference data stated in the above, is to give approval of the test procedure for approval and return them to the applicant.	To delete the specification of the number of copies due to digitization
2.4 Approval Test	**2.4 Approval Test**	
2.4.1 Approval Test **1** The approval test is to be carried out on each type of chain and material grade which under application for each manufacturing factory. The contents of the approval test are to be as indicated in **Table 3.2-1** and the test is to be carried out in the presence of the Surveyor of the Society unless otherwise specified.	**2.4.1 Approval Test** **1** The approval test is to be carried out on each type of chain and material grade which under application for each manufacturing factory. The contents of the approval test are to be as indicated in **Table 2.2-1** and the test is to be carried out in the presence of the Surveyor of the Society unless otherwise specified.	Figure and table numbers have been changed due to reorganization

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks

Table ~~2~~3.2-1 Approval Test Items and Acceptance Criteria for Chains

Figure and table numbers have been changed due to reorganization

Test chains for approval test					
Test item		Numbers of test specimens	Selection of test specimen and details of test specimen	Test procedure	Acceptance criteria
Test of testing object of chains	(1) Proof test	1 length of Chain (27.5*m*)		(1), (2), (4), (5) and (6) are to conform to **Part L of the Rules**.	To conform to **Part L of the Rules**.
	(2) Visual inspection	All links after proof test		(3) Chain length and dimensions of each link are to be measured. 5 links of offshore chain are also to be measured in accordance with **Part L of the Rules** for offshore chain.	To conform to **Part L of the Rules**.
	(3) Dimension inspection	2 sets of 5 links of chain after proof test			Check dimensional change in addition to conforming to **Part L of the Rules**.
	(4) Weight inspection	2 sets of 5 links of chain after proof test			To conform to **Part L of the Rules**.
	(5) Non-destructive test	2 links for Grade 2 and 3 chain All links for offshore chains		Flush butt welded zone is subjected to ultrasonic test, and stud welded part and links are subjected to magnetic particle test.	To be free of harmful defects.
	(6) Breaking test	2 sets of 3 links or more		(6): To conform to **Part L of the Rules**.	As far as practicable, actual breaking load is to be measured in addition to conforming to **Part L of the Rules**.
Mechanical properties test — Base metal	(7) Tensile test	1 piece	(7), (8),(9),(11),(12),(13)	(7), (8), (11) and (12): To confirm to **Part K of the Rules**. However, in bending test, it is to be bent in such a way that the chain surface assumes out-side. The bending radius of Grades 3, *R*3, *R*3*S* and *R*4 chains is to be 25 *mm*. Grades *R*4*S* and *R*5 chains are to be as deemed	To conform to **Part K of the Rules**.
	(8) Bending test	1 piece			To be free of harmful defects.
	(9) Impact test	See Note (3)			See Note (3).
	(10) Austenitic grain size	3 parts			To conform to **Part L of the Rules**.
W	(11) Tensile	2 piece			Measured tensile

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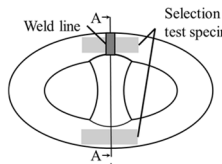
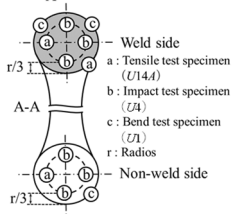
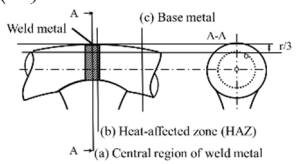
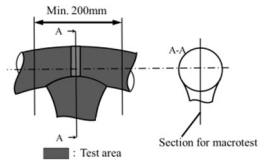
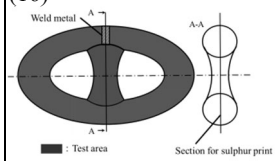
Amended					Original		Remarks
		test			appropriate by the Society. And bending angle is to be not less than following degree; 30 for Grade *R*4, 45 for Grade *R*3*S*, 60 for Grade *R*3, and 120-180 for other grades. And, Grades *R*4*S* and *R*5 chains are to be as deemed appropriate by the Society. (9) and (13): See Note (3). (10) and (17): To conform to **Part L of the Rules**. (offshore chains only) (14): To be examined at its center and the point 2/3 *r* for the structure of *HAZ*, base metal and weld zone. (x 100) (15): Welded part of link in longitudinal section is to be macro-etched. (16): Sulphur print of longitudinal section of link is to be taken.	strength is to exceed minimum tensile strength specified for the base metal. Elongation is to be for reference only.	
		(12) Bending test	2 piece			To be free of harmful defects.	
		(13) Impact test	See Note (3)			See Note (3).	
		(14) Micro test	2 parts of 1 piece	(14) 		Coarse grain area in *HAZ* and degree of heat treatment are to be examined.	
		(15) Macro test	1 piece			To be free of harmful defects.	
		(16) Sulphur print	1 piece			To be free of harmful defects.	
		(17) Austenitic grain size	6 parts	(15)  (16) 		To conform to **Part L of the Rules**.	
Mechanical	Weld zone	(18) Hardness test	3 parts of 1 piece	(18)	(18): Hardness distribution of base metal and weld zone is to be measured at proper intervals. See Note (7). (19): See Note (4).	To be for reference only. However, hardness is to be max 330 *HBW* at the base metal for Grade *R*4*S*,	

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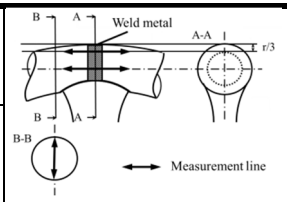
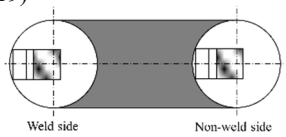
Amended					Original		Remarks
				 (19)  The minimum cross section of the *CTOD* test piece: Chain diameter is less than 120 *mm*: 50 *mm* x 25 *mm* Chain diameter is 120 *mm* and above: 80 *mm* x 40 *mm*		and 340 *HBW* at the base metal for Grade *R*5.	
		(19) *CTOD* test	6 pieces for offshore chain (from 3 links, one each on the weld side and non-weld side)			The lowest *CTOD* value of each set of 3 specimens is to meet the minimum values indicated below in **Table ~~2~~3.2-3**.	

Notes:

(1) The test links used in the approval test are to, in principle, be of the desired largest diameter for approval.

(2) In the case of cast links, their mechanical properties tests are to be carried out in a manner corresponding to those applied to weld zone. Of those items of test of the testing object, the tensile test and compression test may be substituted by magnetic particles testing.

(3) Impact test temperatures and minimum mean absorbed energy are to be in accordance with **Table ~~2~~3.2-2**.

(4) The *CTOD* test as in specified in **Table ~~2~~3.2-1** is carried out for offshore chains, and this test may be omitted in case appropriate records prepared by the manufacturer are available and in case appropriate to the Society. For the initial approval test, a *CTOD* test is to be carried out in accordance with *BS* 7488 *Part* 1, *BS EN ISO*15653:2010 or other standard deemed appropriate by the Society. The notch of the *CTOD* specimen is to be located as close to the surface as practicable. The *CTOD* test is to be taken at -20°C.

(5) In the case of the approval test in association with the change in the manufacturing process as shown in **2.7**, the diameter and number of test link, or the approval test items may be reduced.

(6) When steel materials, manufacturing process or heat treatment methods which are not specified in the rules are to be employed, the Society may request other tests or submission of reference materials in addition to the specified test items.

(7) For chains other than offshore chains, hardness tests of base metal may be omitted in cases deemed appropriate by the Society.

Table 3.2-2 Impact Test (Table is omitted.)	Table 2.2-2 Impact Test (Table is omitted.)	Figure and table numbers have been changed due to reorganization

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
Table 3.2-3 Standard Value of *CTOD* test (Table is omitted.)	Table 2.2-3 Standard Value of *CTOD* test (Table is omitted.)	Figure and table numbers have been changed due to reorganization
2.6 Approval	**2.6 Approval**	
2.6.3 Renewal of Approval and Changes in the Approved Content	**2.6.3 Renewal of Approval and Changes in the Approved Content**	
1 In cases where changes have been made to the approved content of the "Certificate of Approval" specified in **2.6.1**, the applicant is to apply for renewal of approval in accordance with the requirements of **2.2**. In such cases, the "Certificate of Approval" and the documents specified in **2.2.2** are to be submitted together with the appropriate application form (**Form 2-2A**). However, the data to be submitted may be limited to reference data on the changes.	**1** In cases where changes have been made to the approved content of the "Certificate of Approval" specified in **2.6.1**, the applicant is to apply for renewal of approval in accordance with the requirements of **2.2**. In such cases, a copy of the "Certificate of Approval" and the documents specified in **2.2.2** are to be submitted together with the appropriate application form (**Form 2-2A**). However, the data to be submitted may be limited to reference data on the changes.	To delete the specification of the number of copies due to digitization
2 In the case of application for renewal of approval as specified in **-1**, data are to be submitted. These data sets are to include an accurate record of all manufacturing that has been preformed since the last "Certificate of Approval" was issued. In such cases, the Society will conduct a factory inspection if needed.	**2** In the case of application for renewal of approval as specified in **-1**, three sets of data are to be submitted. These data sets are to include an accurate record of all manufacturing that has been preformed since the last "Certificate of Approval" was issued. In such cases, the Society will conduct a factory inspection if needed.	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
Chapter 3 APPROVAL OF MANUFACTURING PROCESS OF CHAIN ACCESSORIES	**Chapter 3 APPROVAL OF MANUFACTURING PROCESS OF CHAIN ACCESSORIES**	Terminology alignment
3.2 Approval Application Procedures	**3.2 Approval Application Procedures**	
3.2.1 Approval Application Procedures Manufacturers are to submit the appropriate application form (**Form 2-2B**) and are to follow the application process specified in the provisions of **2.2.1**.	**3.2.1 Approval Application Procedures** Manufacturers are to submit a copy of the appropriate application form (**Form 2-2B**) and are to follow the application process specified in the provisions of **2.2.1**.	To delete the specification of the number of copies due to digitization
3.4 Approval Test	**3.4 Approval Test**	
3.4.1 Approval Test **1** The approval test is to be carried out on each item of chain accessories under application for each manufacturing factory. The details of approval test are to be as indicated in **Table 3.3-1**, and the test is to be carried out in the presence of the Surveyor of the Society unless otherwise specified.	**3.4.1 Approval Test** **1** The approval test is to be carried out on each item of chain accessories under application for each manufacturing factory. The details of approval test are to be as indicated in **Table 2.3-1**, and the test is to be carried out in the presence of the Surveyor of the Society unless otherwise specified.	Figure and table numbers have been changed due to reorganization
2 Notwithstanding **-1** above, when an enlarged link or end link complying with the provisions of **3.1.1-3** is manufactured by flash butt welding, the details of approval test are to be in accordance with the requirements of the following **(1)** and **(2)**: (1) The "Mechanical properties test of link" in **Table 3.2-1** (2) The "Test on testing object of chain accessories" in **Table 3.3-1**. However, in the case of non-destructive tests, the test details are to be in accordance with the	**2** Notwithstanding **-1** above, when an enlarged link or end link complying with the provisions of **3.1.1-3** is manufactured by flash butt welding, the details of approval test are to be in accordance with the requirements of the following **(1)** and **(2)**: (1) The "Mechanical properties test of link" in **Table 2.2-1** (2) The "Test on testing object of chain accessories" in **Table 2.3-1**. However, in the case of non-destructive tests, the test details are to be in accordance with the	Figure and table numbers have been changed due to reorganization

Amended-Original Requirements Comparison Table
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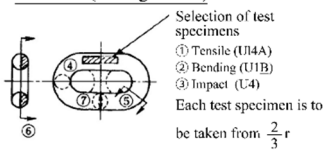
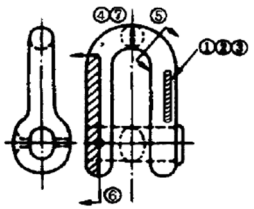
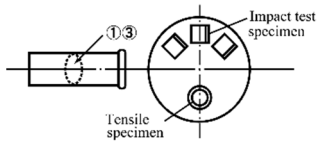
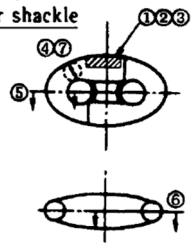
<table>
<tr><th>Amended</th><th>Original</th><th>Remarks</th></tr>
<tr><td>requirements in Table 3.2-1 except for the number of test specimens.</td><td>requirements in Table 2.2-1 except for the number of test specimens.</td><td rowspan="2">Figure and table numbers have been changed due to reorganization</td></tr>
<tr><td colspan="2">Table ~~2~~3.3-1 Approval Test Items and Acceptance Criteria for Accessories
<table>
<tr><th colspan="2">Test item</th><th>Numbers of test specimens</th><th>Selection of test specimen and details of test specimen</th><th>Test procedure</th><th>Acceptance criteria</th></tr>
<tr><td rowspan="9">Mechanical properties test for chain accessories:</td><td>(1) Tensile test</td><td>2 piece</td><td rowspan="9">End link (Enlarged link)
 

End shackle (Joing shackle)
 
Pins of shackle (for offshore chains)
 

Kenter shackle
  </td><td rowspan="9">(1) and (2): To conform to Part K of the Rules. However in bending test, However, in bending test, the bending radius of Grades 3, R3, R3S & R4 chains accessories is to be 25 mm. Grades R4S and R5 chains are to be as deemed appropriate by the Society. And bending angle is to be not less than following degree: 30 for Grade R4, 45 for Grade R3S, 60 for Grade R3, and 120-180 for other grades. Grades R4S and R5 chain accessories are to be as deemed appropriate by the Society.
(3): See Note (2).
(4): To be examined at its surface, 2/3 r and center (x 100)
(5): Areas shown in the figure are to be macroetched.
(6): Sulphur print of the chain accessories in longitudinal section is to be taken.
(7): Hardness distribution in diametric direction is to be measured at proper intervals See Note (7).</td><td>To conform to Part K of the Rules.</td></tr>
<tr><td>(2) Bending test</td><td>2 piece</td><td>To be free of harmful defects.</td></tr>
<tr><td>(3) Impact test</td><td>See Note (2)</td><td>See Note (2)</td></tr>
<tr><td>(4) Micro test</td><td>3 parts of 1 piece</td><td>The degree of heat treatment is diametric direction is to be examined.</td></tr>
<tr><td>(5) Macro test</td><td>1 part</td><td>To be free of harmful defects.</td></tr>
<tr><td>(6) Sulphur print</td><td>1 piece</td><td>To be free of harmful defects.</td></tr>
<tr><td>(7) Hardness test</td><td>1 piece</td><td>To be for reference only.
However, hardness is to be max 330 HBW for Grade R4S, and 340 HBW for Grade R5.</td></tr>
<tr><td>(8) CTOD test</td><td>3 pieces</td><td>The lowest CTOD value of each set of 3 specimens is to meet the minimum values indicated below</td></tr>
</table></td></tr>
</table>

Amended-Original Requirements Comparison Table
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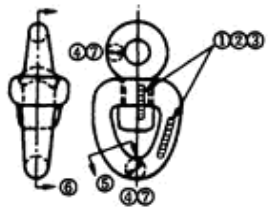
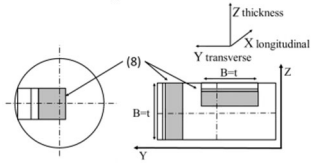
Amended				Original		Remarks
			Swivel  *CTOD* test specimen  a) Circular section b) Rectangular section (Notes) For b), the grain flow is to be considered in the longitudinal direction X. Location of test specimen may be whichever indicated in b). The minimum cross section of *CTOD* test specimen: Circular section: Diameter is less than 120 *mm*: 50 *mm* x 25 *mm* Diameter is 120 *mm* and above: 80 *mm* x 40 *mm* Rectangular section: The desired maximum thickness for approval is specimen thickness *B* and transverse *W*=2*B* is standard.	(8): See Note (5). (9) and (10): To conform to **Part K of the Rules**.(offshore chain accessories only)	in **Table ~~2~~3.3-3**.	
	(9) Austenitic grain size	Circular section :1piece Non-circular section :1piece			To conform to **Part K of the Rules**.	
	(10) Hydrogen embrittlement test	2 pieces			To conform to **Part K of the Rules**.	
Test on testing object of chain accessories	(11) Proof test	1 piece		(11), (12), (13) and (14): To conform to **Part L of the Rules**. (15): Non-destructive tests consist of ultrasonic test and magnetic particle test.	To conform to **Part L of the Rules**.	
	(12) Breaking test	1 piece			See Note (6)	
	(13) Dimension inspection	1 piece			To conform to **Part L of the Rules**. In addition, dimensional changes are to be measured.	
	(14) Visual inspection	1 piece			To be free of harmful defects.	
	(15) Non-destructive test	1 piece			To be free of harmful defects.	

Notes:

(1) The test chain accessories used for approval test are to, in principle, be two or three, in number, of the larges diameter under application.

(2) The number of impact test specimens, test temperatures and minimum mean absorbed energy are to be in accordance with **Table ~~2~~3.3-2**.

(3) In the case of the approval test required in connection with the change in the manufacturing as shown in **3.5**, the Society may reduce the requirements in the diameter and number of test chain accessories with respect to the test items.

(4) When any steel materials, manufacturing process or heat treatment not specified in the Rules are intended to be used, the Society may request other

Amended	Original	Remarks
testing procedure or submission of reference data in addition to those specified in the Rules. (5) *CTOD* tests are required for the initial approval of offshore mooring chain accessories. This test may be omitted in cases where appropriate records prepared by the manufacturer are available and in cases deemed appropriate to the Society. The *CTOD* test is to be carried out in accordance with *BS* 7488 *Part* 1, *BS EN ISO*7488:2010 or other standard deemed appropriate by the Society. The notch of the *CTOD* specimen is to be located as close to the surface as practicable. The *CTOD* test is to be taken at -20°C. (6) Each specimen is to be capable of withstanding 1.1 times of the specified breaking test load specified in **Table L3.10, Part L of the Rules**. In case of offshore chain accessories, each specimen is to be capable of withstanding their breaking test loads without fracturing for at least 30 *seconds*. (7) For chain accessories other than offshore mooring chain accessories, hardness tests may be omitted in cases deemed appropriate by the Society.		
Table 3.3-2 Impact Test (Table is omitted.)	Table 2.3-2 Impact Test (Table is omitted.)	Figure and table numbers have been changed due to reorganization
Table 3.3-3 Standard Value of *CTOD* test (Table is omitted.)	Table 2.3-3 Standard Value of *CTOD* test (Table is omitted.)	Figure and table numbers have been changed due to reorganization
3.5 Submission of Test Reports	**3.5 Submission of Test Reports**	
The manufacturer, after completion of the approval test, is to prepare test reports including those covering the manufacturing process of test chain accessories, all endorsed by the Surveyor of the Society. These reports are to be submitted to the Society.	The manufacturer, after completion of the approval test, is to prepare test reports including those covering the manufacturing process of test chain accessories, in triplicate, all endorsed by the Surveyor of the Society. These reports are to be submitted to the Society.	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
Chapter 4 TYPE APPROVAL OF RAW TEXTILES FOR SYNTHETIC FIBRE ROPES	**Chapter 4 APPROVAL OF RAW TEXTILES FOR SYNTHETIC FIBRE ROPES**	Terminology alignment
4.2 Application Procedures	**4.2 Application Procedures**	Terminology alignment
4.2.1 Application Procedures The manufacturer of raw textiles who intends to obtain approval of the manufacturing process of raw textiles is to submit his application for approval the appropriate application form (**Form 2-3**) filled with the following reference data, stated in **(1)** to **(4)** below to the Society. In cases where reference data compatible with those to be newly submitted were previously submitted to the Society, submission of such reference data may be omitted by giving notification to the Society to that extent. ((1) to (4) are omitted.)	**4.2.1 Application Procedures** The manufacturer of raw textiles who intends to obtain approval of the manufacturing process of raw textiles is to submit his application for approval a single copy of the appropriate application form (**Form 2-3**) filled with the following reference data each in triplicate, stated in **(1)** to **(4)** below to the Society. In cases where reference data compatible with those to be newly submitted were previously submitted to the Society, submission of such reference data may be omitted by giving notification to the Society to that extent. ((1) to (4) are omitted.)	To delete the specification of the number of copies due to digitization
4.4 Approval Test	**4.4 Approval Test**	Terminology alignment
4.4.2 Test Procedures The procedures of the tests specified in **4.4.1-1** above are to be in accordance with the following requirements: (1) Linear strength and elongation tests The number of test specimens used in the test is to be 10, and average value of the measured values of linear strength and elongation on these test specimens are to be obtained. The average value of linear strength and	**4.4.2 Test Procedures** The procedures of the tests specified in **4.4.1-1** above are to be in accordance with the following requirements: (1) Linear strength and elongation tests The number of test specimens used in the test is to be 10, and average value of the measured values of linear strength and elongation on these test specimens are to be obtained. The average value of linear strength and	Figure and table numbers have been changed due to reorganization

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
elongation values thus obtained are to satisfy those given in **Table 3.4-1**. (2) Chemical resistance test The chemical resistance tests are to comprise alkali-resistance test and acid-resistance test. In alkali-resistance test, the test specimen is to be soaked in 10% caustic soda solution at a temperature 20±2℃ for a period of 24 *hours*, whereas in acid-resistance test, the test specimen is to be soaked in 10% acid solution at a temperature 20±2℃ for a period of 24 *hours*, and then rinsed with water, and the linear strength is to be measured by the same method as in **(1)** above. The number of test specimens is to be 10 for each chemical solution. The linear strength is to be converted into the value of residual strength ratio of chemical resistance by the following equation. These average values are to satisfy the values given in **Table 3.4-1**. Residual chemical resistance strength ratio $= \frac{\text{Linear strength (g) after chemical processing}}{\text{Linear strength (g) before chemical processing}} \times 100(\%)$	elongation values thus obtained are to satisfy those given in **Table 2.4-1**. (2) Chemical resistance test The chemical resistance tests are to comprise alkali-resistance test and acid-resistance test. In alkali-resistance test, the test specimen is to be soaked in 10% caustic soda solution at a temperature 20±2℃ for a period of 24 *hours*, whereas in acid-resistance test, the test specimen is to be soaked in 10% acid solution at a temperature 20±2℃ for a period of 24 *hours*, and then rinsed with water, and the linear strength is to be measured by the same method as in **(1)** above. The number of test specimens is to be 10 for each chemical solution. The linear strength is to be converted into the value of residual strength ratio of chemical resistance by the following equation. These average values are to satisfy the values given in **Table 2.4-1**. Residual chemical resistance strength ratio $= \frac{\text{Linear strength (g) after chemical processing}}{\text{Linear strength (g) before chemical processing}} \times 100(\%)$	Figure and table numbers have been changed due to reorganization
4.4.3 Submission of Test Reports The manufacturer is to prepare test reports after completion of the tests, obtain the surveyor's signature thereon, and is to submit them, to the Society.	**4.4.3 Submission of Test Reports** The manufacturer is to prepare test reports after completion of the tests, obtain the surveyor's signature thereon, and is to submit them, in triplicate, to the Society.	To delete the specification of the number of copies due to digitization
Table 3.4-1 Standard Tensile Strength Values for Raw Textiles (Table is omitted.)	Table 2.4-1 Standard Tensile Strength Values for Raw Textiles (Table is omitted.)	

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
4.5 Approval	**4.5 Approval**	
4.5.1 Notification of Approval The Society will grant approval to the raw textiles for synthetic fibre ropes, which have been deemed appropriate on the basis of Surveyor reports and documents submitted in accordance with the requirements in **4.2** through **4.4**. In this case, a "Certificate of Approval" that includes the approval number, approval date, type of raw textiles etc. will be issued. And, in accordance with the requirements in **4.2.1** and **4.4.3,** the Society will stamp the submitted data it deems necessary with a seal of approval and return such date to the applicant.	**4.5.1 Notification of Approval** The Society will grant approval to the raw textiles for synthetic fibre ropes, which have been deemed appropriate on the basis of Surveyor reports and documents submitted in accordance with the requirements in **4.2** through **4.4**. In this case, a "Notice of Approval" that includes the approval number, approval date, type of raw textiles etc. will be issued. And, in accordance with the requirements in **4.2.1** and **4.4.3,** the Society will stamp the submitted data it deems necessary with a seal of approval and return such date to the applicant.	Terminology alignment
4.5.3 Renewal of Approval and Changes in the Approved Content **1** In cases where changes have been made to the approved content of the "Certificate of Approval" specified in **4.5.1**, the applicant is to apply for renewal of approval in accordance with the requirements of **4.2**. In such cases, "Certificate of Approval" and the documents specified in **4.2.1** are to be submitted together with the appropriate application form (**Form 2-3**). However, the data to be submitted may be limited to reference data on the changes.	**4.5.3 Renewal of Approval and Changes in the Approved Content** **1** In cases where changes have been made to the approved content of the "Certificate of Approval" specified in **4.5.1**, the applicant is to apply for renewal of approval in accordance with the requirements of **4.2**. In such cases, a copy of "Certificate of Approval" and the documents specified in **4.2.1** are to be submitted together with the appropriate application form (**Form 2-3**). However, the data to be submitted may be limited to reference data on the changes.	To delete the specification of the number of copies due to digitization
2 In the case of application for renewal of approval as specified in **-1**, data are to be submitted. These data sets are to include an accurate record of all manufacturing that has been performed since the last "Certificate of Approval" was issued. In such cases, the Society will conduct a factory inspection if needed.	**2** In the case of application for renewal of approval as specified in **-1**, three sets of data are to be submitted. These data sets are to include an accurate record of all manufacturing that has been performed since the last "Certificate of Approval" was issued. In such cases, the Society will conduct a factory inspection if needed.	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
6 Manufacturers whose renewal is approved are to return the old "Certificate of Approval" to the Society as soon as possible after receiving the new certificate and the term of validity of the old certificate expires.	**6** Manufacturers whose renewal is approved are to return the old "Type Approval Certificate" to the Society as soon as possible after receiving the new certificate and the term of validity of the old certificate expires.	Terminology alignment
7 Manufacturers whose request for changes in approved content is accepted are to return the old "Certificate of Approval" to the Society as soon as possible after receiving the new certificate.	**7** Manufacturers whose request for changes in approved content is accepted are to return the old "Type Approval Certificate" to the Society as soon as possible after receiving the new certificate.	Terminology alignment
Chapter 5 APPROVAL OF MANUFACTURING PROCESS OF SYNTHETIC FIBRE ROPES	**Chapter 5 APPROVAL OF MANUFACTURING PROCESS OF SYNTHETIC FIBRE ROPES**	
5.2 Application Procedures	**5.2 Application Procedures**	
5.2.1 Application Procedures Manufacturer who applies for the approval of manufacturing process of synthetic fibre ropes is to submit for approval the appropriate application form (**Form 2-4**) with plans for the approval test as well as the following items attached, to the Society: ((1) to (4) are omitted.)	**5.2.1 Application Procedures** Manufacturer who applies for the approval of manufacturing process of synthetic fibre ropes is to submit for approval a single copy of the appropriate application form (**Form 2-4**) with plans for the approval test as well as the following items attached, each in triplicate, to the Society: ((1) to (4) are omitted.)	To delete the specification of the number of copies due to digitization
5.4 Approval Test	**5.4 Approval Test**	
5.4.1 Test Items **3** The test procedures for **-1** above are to be in accordance with the following requirements:	**5.4.1 Test Items** **3** The test procedures for **-1** above are to be in accordance with the following requirements:	

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
(1) Tensile tests in wet and dry conditions Tensile tests on three each test specimens are to, in principle, be carried out for each of the test conditions given in **Table 3.5-1**, and breaking strength and elongation are to be measured. Respective breaking loads are to satisfy the loads guaranteed by manufacturers. Values with respect to elongation are to be for reference only. The gauge length of the test specimen to be 30 times or more the rope diameter, however it needs not to exceed 1 *meter*.	(1) Tensile tests in wet and dry conditions Tensile tests on three each test specimens are to, in principle, be carried out for each of the test conditions given in **Table 2.5-1**, and breaking strength and elongation are to be measured. Respective breaking loads are to satisfy the loads guaranteed by manufacturers. Values with respect to elongation are to be for reference only. The gauge length of the test specimen to be 30 times or more the rope diameter, however it needs not to exceed 1 *meter*.	Figure and table numbers have been changed due to reorganization
(2) Abrasion resistance tensile test A total of six test specimens are to be taken from ropes with diameter from 12 to 24 *mm*. Three of them are to be set in the abrasion resistance testing machine with the following particulars, and are to be subjected to repeated strokes for 500 times. Stroke: 200-300 *mm* Abrasion speed: 50 *strokes*/*min* Abrasion surface: Grinder with particle size No.120 Tensile load: 98*N* Those three tested specimens together with other three non-tested specimens are to be placed in a thermostatic oven kept at a temperature of 20℃ and a humidity of 65%, and left there for one *hour*. They are then to be taken out, and be subjected to tensile tests for measuring the tensile strength and elongation, whereby the strength values of the rope before and after abrasion are to be compared. The ratio of the residual abrasion strength to the strength without abrasion (the residual abrasion strength ratio) is to satisfy the values given in **Table 3.5-2**.	(2) Abrasion resistance tensile test A total of six test specimens are to be taken from ropes with diameter from 12 to 24 *mm*. Three of them are to be set in the abrasion resistance testing machine with the following particulars, and are to be subjected to repeated strokes for 500 times. Stroke: 200-300 *mm* Abrasion speed: 50 *strokes*/*min* Abrasion surface: Grinder with particle size No.120 Tensile load: 98*N* Those three tested specimens together with other three non-tested specimens are to be placed in a thermostatic oven kept at a temperature of 20℃ and a humidity of 65%, and left there for one *hour*. They are then to be taken out, and be subjected to tensile tests for measuring the tensile strength and elongation, whereby the strength values of the rope before and after abrasion are to be compared. The ratio of the residual abrasion strength to the strength without abrasion (the residual abrasion strength ratio) is to satisfy the values given in **Table 2.5-2**.	

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
For other test conditions than those shown above, they are to considered appropriate by the Society. (3) Weather resistance test A total of six test specimens are to be taken from ropes with diameter from 12 to 24 *mm*. Three of these test specimens are to be placed in the weather resistance test machine controlled to the following conditions where they are to be left for 200 *hours* or more. Weathering light: Sunshine carbon arc light or ultraviolet carbon arc light Temperature of black panel: 63±1℃ Period of water spray: 18 *min*/2*hours* The six test specimens including those three non-tested specimens are then to be placed in a thermostatic oven kept at a temperature of 20℃ and a humidity of 65%, and left there for one *hour*. These test specimens are to be taken out, tensile strength and elongation are to be measured, and the strength after the weathering resistance test and that of the test specimens not subjected to such weathering resistance test are to be compared. The ratio of the former to the latter (the residual weathering strength ratio) is to satisfy the values given in **Table 3.5-2**. Table 3.5-1 Test Conditions (Table is omitted.)	For other test conditions than those shown above, they are to considered appropriate by the Society. (3) Weather resistance test A total of six test specimens are to be taken from ropes with diameter from 12 to 24 *mm*. Three of these test specimens are to be placed in the weather resistance test machine controlled to the following conditions where they are to be left for 200 *hours* or more. Weathering light: Sunshine carbon arc light or ultraviolet carbon arc light Temperature of black panel: 63±1℃ Period of water spray: 18 *min*/2*hours* The six test specimens including those three non-tested specimens are then to be placed in a thermostatic oven kept at a temperature of 20℃ and a humidity of 65%, and left there for one *hour*. These test specimens are to be taken out, tensile strength and elongation are to be measured, and the strength after the weathering resistance test and that of the test specimens not subjected to such weathering resistance test are to be compared. The ratio of the former to the latter (the residual weathering strength ratio) is to satisfy the values given in **Table 2.5-2**. Table 2.5-1 Test Conditions (Table is omitted.)	Figure and table numbers have been changed due to reorganization
5.4.2 Submission of Test Report The manufacturer is to prepare test report after	**5.4.2 Submission of Test Report** The manufacturer is to prepare test report after	To delete the specification of the number of copies

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
completion of the tests, receive signature of the surveyor who witnessed the tests, and is to submit them, to the Society.	completion of the tests, receive signature of the surveyor who witnessed the tests, and is to submit them, in triplicate, to the Society.	due to digitization
5.5 Approval	**5.5 Approval**	
5.5.3 Renewal of Approval	**5.5.3 Renewal of Approval**	
1 In the case of application for renewal of approval, the applicant is to submit the appropriate application form (**Form 2-4**) along with the "Certificate of Approval" and a list of the products for which approval is desired to be continued or revoked. In such cases, the aforementioned list is to include information such as the product name, manufacturer and kind of filaments used, whether an inspection has been carried out by the Society during the previous 5 *years*, the production output during the previous year, whether the approval is to be continued not, etc. Approval is to be revoked, however, in cases where the filaments used in the rope are no longer being manufactured.	**1** In the case of application for renewal of approval, the applicant is to submit the appropriate application form (**Form 2-4**) along with a copy of the "Certificate of Approval" and three copies of a list of the products for which approval is desired to be continued or revoked. In such cases, the aforementioned list is to include information such as the product name, manufacturer and kind of filaments used, whether an inspection has been carried out by the Society during the previous 5 *years*, the production output during the previous year, whether the approval is to be continued not, etc. Approval is to be revoked, however, in cases where the filaments used in the rope are no longer being manufactured.	To delete the specification of the number of copies due to digitization
2 (Omitted)	**2** (Omitted)	
3 In addition to the factory inspection specified in **-2**, the breaking test specified in **5.1.7, Part L of the Rules for the Survey and Construction of Steel Ships** is to be carried out according to the categories specified in **Table 3.5-3**. One specimen each is to be taken from three different coils of rope which are larger than 40 *mm* or the largest size manufactured in diameter for each category. Each specimen is to satisfy the provisions in **5.1.7(5), Part L of the Rules for the Survey and Construction of Steel Ships**. However, in cases where product inspections (appearance and dimension) for each	**3** In addition to the factory inspection specified in **-2**, the breaking test specified in **5.1.7, Part L of the Rules for the Survey and Construction of Steel Ships** is to be carried out according to the categories specified in **Table 2.5-3**. One specimen each is to be taken from three different coils of rope which are larger than 40 *mm* or the largest size manufactured in diameter for each category. Each specimen is to satisfy the provisions in **5.1.7(5), Part L of the Rules for the Survey and Construction of Steel Ships**. However, in cases where product inspections (appearance and dimension) for each	Figure and table numbers have been changed due to reorganization

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
category have been carried out by the Society during the previous 5 *years*, breaking tests for the products in this category may be dispensed with. **5.5.4 Changes in Approved Content** **1** In cases where changes have been made to the approved content of the "Certificate of Approval" or the "Particulars of Approval Conditions" specified in **5.5.1-1**, the applicant is to apply for approval in accordance with the requirements of **5.2**. In such cases, the "Certificate of Approval" and the documents specified in **5.2.1** are to be submitted together with the appropriate application form (**Form 2-4**). However, the data to be submitted may be limited to that related to the changes. Table 3.5-2 Residual Strength Ratio of Synthetic Fibre Ropes (Table is omitted.) Table 3.5-3 Division of Synthetic Ropes (Table is omitted.) **Chapter 6 TYPE APPROVAL OF EMERGENCY TOWING ARRANGEMENTS** **6.1 General** **6.1.1 Scope** **1** This Chapter applies to the type approval of	category have been carried out by the Society during the previous 5 *years*, breaking tests for the products in this category may be dispensed with. **5.5.4 Changes in Approved Content** **1** In cases where changes have been made to the approved content of the "Certificate of Approval" or the "Particulars of Approval Conditions" specified in **5.5.1-1**, the applicant is to apply for approval in accordance with the requirements of **5.2**. In such cases, a copy of the "Certificate of Approval" and the documents specified in **5.2.1** are to be submitted together with the appropriate application form (**Form 2-4**). However, the data to be submitted may be limited to that related to the changes. Table 2.5-2 Residual Strength Ratio of Synthetic Fibre Ropes (Table is omitted.) Table 2.5-3 Division of Synthetic Ropes (Table is omitted.) **Chapter 6 EMERGENCY TOWING ARRANGEMENTS** **6.1 General** **6.1.1 Scope** **1** This Chapter applies to the approval of prototype of	To delete the specification of the number of copies due to digitization Terminology alignment Terminology alignment

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Amended	Original	Remarks
emergency towing arrangements (Hereinafter referred to as "ETA" in this Chapter.) and examinations, tests and inspection of products of ETA based upon the requirements specified in **14.5.2.4, Part 1, Part C of the Rules for the Survey and Construction of Steel Ships**. Where tests for type approval of ETA mean the examinations and tests in order to confirm that the prototype of ETA made of components listed in **14.5.2.3, Part 1, Part C of the Rules for the Survey and Construction of Steel Ships** complies with the requirements specified in **14.5.2, Part 1, Part C of the Rules for the Survey and Construction of Steel Ships**, and production tests of ETA mean the examinations and tests to be carried out against the products of each component of ETA which has obtained the type approval. **2** Test for type approval of ETA and production tests of each component of ETA are to be carried out separately.	emergency towing arrangements (Hereinafter referred to as "ETA" in this Chapter.) and examinations, tests and inspection of products of ETA based upon the requirements specified in **14.5.2.4, Part 1, Part C of the Rules for the Survey and Construction of Steel Ships**. Where tests for approval of prototype of ETA mean the examinations and tests in order to confirm that the prototype of ETA made of components listed in **14.5.2.3, Part 1, Part C of the Rules for the Survey and Construction of Steel Ships** complies with the requirements specified in **14.5.2, Part 1, Part C of the Rules for the Survey and Construction of Steel Ships**, and production tests of ETA mean the examinations and tests to be carried out against the products of each component of ETA which has obtained the approval of the prototype. **2** Test for approval of prototype of ETA and production tests of each component of ETA are to be carried out separately.	
6.2 Application Procedures	**6.2 Application Procedures**	
1 Manufacturer who intends to obtain type approval of ETA is to submit the appropriate application form (**Form 2-5**) accompanied by the following data. ((1) to (14) are omitted.)	**1** Manufacturer who intends to obtain approval of prototype of ETA is to submit the appropriate application form (**Form 2-5**) accompanied by three sets of the following data. ((1) to (14) are omitted.)	Terminology alignment To delete the specification of the number of copies due to digitization
6.5 Submission of Test Records	**6.5 Submission of Test Records**	
6.5.1 General The manufacturer is to make the test records after	**6.5.1 General** The manufacturer is to make the test records after	To delete the specification

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Amended	Original	Remarks
approval tests described in **6.4** have been completed and is to submit the tests record, endorsed by the attended surveyor to the Society.	approval tests described in **6.4** have been completed and is to submit the tests record in duplicate, endorsed by the attended surveyor to the Society.	of the number of copies due to digitization
6.6 Approval	**6.6 Approval**	
6.6.1 Notification of Approval The Society upon finding that the results of confirmation survey of manufacturing factory and the record of prototype tests are all satisfactory, it to type approve of ETA, and send a notice of approval describing the following contents to the applicant and inform the branch office within jurisdiction of address of the applicant to that effect. ((1) to (3) are omitted.)	**6.6.1 Notification of Approval** The Society upon finding that the results of confirmation survey of manufacturing factory and the record of prototype tests are all satisfactory, it to approve the prototype of ETA, and send a notice of approval describing the following contents to the applicant and inform the branch office within jurisdiction of address of the applicant to that effect. ((1) to (3) are omitted.)	Terminology alignment
6.6.3 Renewal of Approval and Changes in the Approved Content **1** In cases where changes have been made to the approved content of the "Certificate of Approval" specified in **6.6.1**, the applicant is to apply for renewal of approval in accordance with the requirements of **6.2**. In such cases, the "Certificate of Approval" and the documents specified in **6.2.1** are to be submitted together with the appropriate application form (**Form 2-5**). However, the data to be submitted may be limited to reference data on the changes.	**6.6.3 Renewal of Approval and Changes in the Approved Content** **1** In cases where changes have been made to the approved content of the "Certificate of Approval" specified in **6.6.1**, the applicant is to apply for renewal of approval in accordance with the requirements of **6.2**. In such cases, a copy of the "Certificate of Approval" and the documents specified in **6.2.1** are to be submitted together with the appropriate application form (**Form 2-5**). However, the data to be submitted may be limited to reference data on the changes.	To delete the specification of the number of copies due to digitization
2 In the case of application for renewal of approval specified in **-1**, data are to be submitted. These data sets are to include an accurate record of all manufacturing that has been performed since the last "Certificate of approval" was	**2** In the case of application for renewal of approval specified in **-1**, three sets of data are to be submitted. These data sets are to include an accurate record of all manufacturing that has been performed since the last "Certificate of	To delete the specification of the number of copies due to digitization

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Amended	Original	Remarks
issued. In such cases, the Society will conduct a factory inspection if needed.	approval" was issued. In such cases, the Society will conduct a factory inspection if needed.	
Chapter 7 TYPE APPROVAL OF LIFE-SAVING APPLIANCES	**Chapter 7 LIFE-SAVING APPLIANCES**	Terminology alignment
7.2 Type Approval	**7.2 Type Approval**	
7.2.1 Procedures for Application **1** An applicant for type approval is to submit the appropriate application form (**Form 2-6**) and the following drawings and documents for examination: ((1) to (5) are omitted.)	**7.2.1 Procedures for Application** **1** An applicant for type approval is to submit the appropriate application form (**Form 2-6**) and the following drawings and documents for examination, each in triplicate: ((1) to (5) are omitted.)	To delete the specification of the number of copies due to digitization
2 Irrespective of the above **-1**, the applicant may submit the appropriate application form (**Form 2-8**) only, instead of submitting the relevant drawings and documents, if they are identical to drawings and documents already submitted to the Society in relation to appliances or equipment previously type approved by the Society.	**2** Irrespective of the above **-1**, the applicant may submit the appropriate application form (**Form 2-8**) only, in triplicate, instead of submitting the relevant drawings and documents, if they are identical to drawings and documents already submitted to the Society in relation to appliances or equipment previously type approved by the Society.	To delete the specification of the number of copies due to digitization
7.2.3 Prototype Tests for Type Approval **4** After completion of the prototype test, the applicant is to compile the test results and submit the test records endorsed by the attending Surveyor to the Society.	**7.2.3 Prototype Tests for Type Approval** **4** After completion of the prototype test, the applicant is to compile the test results and submit the test records endorsed by the attending Surveyor in triplicate to the Society.	To delete the specification of the number of copies due to digitization
7.2.5 Renewal of Validity of Certificate of Type Approval **1** When a firm that has been issued with a Certificate of	**7.2.5 Renewal of Validity of Certificate of Type Approval** **1** When a firm that has been issued with a Certificate of	To delete the specification

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Amended	Original	Remarks
Type Approval for a given appliance or item of equipment wishes to renew the Certificate, the firm is to submit the appropriate application form (**Form 2-6**) with a list of the appliances or equipment manufactured in the past to the Society within the validity of the Certificate.	Type Approval for a given appliance or item of equipment wishes to renew the Certificate, the firm is to submit the appropriate application form (**Form 2-6**) with a list of the appliances or equipment manufactured in the past in triplicate to the Society within the validity of the Certificate.	of the number of copies due to digitization
7.5 Lifeboats	**7.5 Lifeboats**	
7.5.2 Type Approval **1** Drawings and documents data to be submitted Drawings and documents to be submitted are specified in **7.2.1-1(2)** to **(5)** and the following: ((1) to (24) are omitted.)	**7.5.2 Type Approval** **1** Drawings and documents data to be submitted Drawings and documents to be submitted are specified in **7.2.1-1(2)** to **(5)** and the following, each in triplicate: ((1) to (24) are omitted.)	To delete the specification of the number of copies due to digitization
7.6 Rescue Boats	**7.6 Rescue Boats**	
7.6.3 Type Approval **1** Drawings and documents to be submitted Drawings and documents to be submitted are specified in **7.2.1-1(2)** to **(5)** and **7.5.2-1(1)** to **(15)** and **(18)** to **(24)** and the following: ((1) to (3) are omitted.)	**7.6.3 Type Approval** **1** Drawings and documents to be submitted Drawings and documents to be submitted are specified in **7.2.1-1(2)** to **(5)** and **7.5.2-1(1)** to **(15)** and **(18)** to **(24)** and the following, each in triplicate: ((1) to (3) are omitted.)	To delete the specification of the number of copies due to digitization

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Amended	Original	Remarks
7.7 Inflatable Liferafts	**7.7 Inflatable Liferafts**	
7.7.2 Type Approval **1** Drawings and documents to be submitted Drawings and documents to be submitted are specified in **7.2.1-1(2)** to **(5)** and the following: ((1) and (11) are omitted.)	**7.7.2 Type Approval** **1** Drawings and documents to be submitted Drawings and documents to be submitted are specified in **7.2.1-1(2)** to **(5)** and the following, each in triplicate: ((1) and (11) are omitted.)	To delete the specification of the number of copies due to digitization
7.8 Launching Appliances for Lifeboats, Rescue Boats and Liferafts	**7.8 Launching Appliances for Lifeboats, Rescue Boats and Liferafts**	
7.8.2 Type Approval **1** Drawings and documents to be submitted Drawings and documents to be submitted are listed in **7.2.1-1(2)** to **(5)** and the following: ((1) to (7) are omitted.)	**7.8.2 Type Approval** **1** Drawings and documents to be submitted Drawings and documents to be submitted are listed in **7.2.1-1(2)** to **(5)** and the following, each in triplicate: ((1) to (7) are omitted.)	To delete the specification of the number of copies due to digitization
7.9 Engines for Lifeboats and Rescue Boats (including reduction and reversing gears)	**7.9 Engines for Lifeboats and Rescue Boats (including reduction and reversing gears)**	
7.9.1 Type Approval **1** Drawings and documents to be submitted Drawings and documents to be submitted are listed in **7.2.1-1(2)** to **(5)** and the following: ((1) to (11) are omitted.)	**7.9.1 Type Approval** **1** Drawings and documents to be submitted Drawings and documents to be submitted are listed in **7.2.1-1(2)** to **(5)** and the following, each in triplicate: ((1) to (11) are omitted.)	To delete the specification of the number of copies due to digitization

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Amended	Original	Remarks
7.10 Release Mechanisms of Lifeboats or Rescue Boats Launched by Falls other than Free-fall Lifeboats	**7.10 Release Mechanisms of Lifeboats or Rescue Boats Launched by Falls other than Free-fall Lifeboats**	
7.10.1 Type Approval **1** Drawings and documents to be submitted Drawings and documents to be submitted are specified in **7.2.1-1(2)** to **(5)** and the following: ((1) to (5) are omitted.)	**7.10.1 Type Approval** **1** Drawings and documents to be submitted Drawings and documents to be submitted are specified in **7.2.1-1(2)** to **(5)** and the following, each in triplicate: ((1) to (5) are omitted.)	To delete the specification of the number of copies due to digitization
7.11 Fall Preventer Devices Fitted with Lifeboats or Rescue Boats Launched by Falls other than Free-fall Lifeboats	**7.11 Fall Preventer Devices Fitted with Lifeboats or Rescue Boats Launched by Falls other than Free-fall Lifeboats**	
7.11.1 Type Approval **1** Drawings and documents to be submitted Drawings and documents to be submitted are specified in **7.2.1-1(2)** to **(5)** and the following: ((1) to (6) are omitted.)	**7.11.1 Type Approval** **1** Drawings and documents to be submitted Drawings and documents to be submitted are specified in **7.2.1-1(2)** to **(5)** and the following, each in triplicate: ((1) to (6) are omitted.)	To delete the specification of the number of copies due to digitization

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Amended	Original	Remarks
Chapter 8 TYPE APPROVAL OF SEWAGE TREATMENT PLANT AND SEWAGE COMMINUTING AND DISINFECTING SYSTEM	**Chapter 8 SEWAGE TREATMENT PLANT AND SEWAGE COMMINUTING AND DISINFECTING SYSTEM**	Terminology alignment
8.2 Application	**8.2 Application**	
8.2.1 Application Form The manufacturer, who intends to obtain the type approval, is to submit the appropriate application form (**Form 2-9**) filled in with necessary data and information to the Society (Head Office).	**8.2.1 Application Form** The manufacturer, who intends to obtain the approval of use, is to submit the appropriate application form (**Form 2-9**) filled in with necessary data and information to the Society (Head Office).	Terminology alignment
8.2.2 Documents **1** The documents listed **(1)** through **(9)** below, are to be submitted together with the application form specified in **8.2.1**. ((1) to (10) are omitted.)	**8.2.2 Documents** **1** The documents listed **(1)** through **(9)** below, each in triplicate, are to be submitted together with the application form specified in **8.2.1**. ((1) to (10) are omitted.)	To delete the specification of the number of copies due to digitization
8.4 Approval Tests for Sewage Treatment Plant	**8.4 Approval Tests for Sewage Treatment Plant**	
8.4.4 Tilt and Vibration Test **2** Control and sensor components used for the plant are to be subject to the vibration test of which conditions are specified in **Table 3.8-1** and **Table 3.8-2**.	**8.4.4 Tilt and Vibration Test** **2** Control and sensor components used for the plant are to be subject to the vibration test of which conditions are specified in **Table 2.8-1** and **Table 2.8-2**.	
Table 3.8-1 Resonance Test Condition (Table is omitted.)	Table 2.8-1 Resonance Test Condition (Table is omitted.)	Figure and table numbers have been changed due to reorganization

Amended-Original Requirements Comparison Table
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<table>
<tr><th>Amended</th><th>Original</th><th>Remarks</th></tr>
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Table 3~~2~~.8-2 Endurance Test Condition

	Amplitude or Acceleration	Frequency	Directions	Cycles	Total test time
When resonance points exist on the test specified in **Table 3~~2~~.8-1**	Same Amplitude or Acceleration of the test specified in **Table 3~~2~~.8-1**	Resonance points	3 axis directions	1 *cycle* for each directions	4.5 *hours*
When resonance points do not exist on the test specified in **Table 3~~2~~.8-1**	2 *mm*	13.2 *Hz*	Ditto	Ditto	Ditto

8.5 Approval Tests for Sewage Comminuting and Disinfecting System

8.5.1 Approval Tests for Sewage Comminuting and Disinfecting System

2 Vibration test

It is to be confirmed that no abnormality is observed during the vibration test of which conditions are specified in **Table 3.8-1** and **Table 3.8-2**.

8.6 Approval

8.6.1 Test Records

The manufacturer is to prepare records of the approval test after completion of the test, to obtain verification by the Society's attending surveyor and to submit them, to the Society.

</td><td>

8.5 Approval Tests for Sewage Comminuting and Disinfecting System

8.5.1 Approval Tests for Sewage Comminuting and Disinfecting System

2 Vibration test

It is to be confirmed that no abnormality is observed during the vibration test of which conditions are specified in **Table 2.8-1** and **Table 2.8-2**.

8.6 Approval

8.6.1 Test Records

The manufacturer is to prepare records of the approval test after completion of the test, to obtain verification by the Society's attending surveyor and to submit them, in triplicate, to the Society.

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Figure and table numbers have been changed due to reorganization

Figure and table numbers have been changed due to reorganization

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Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
Chapter 9 TYPE APPROVAL OF FIBER REINFORCED PLASTIC (FRP)	**Chapter 9 APPROVAL OF USE OF FIBER REINFORCED PLASTIC (FRP)**	Terminology alignment
9.1 General	**9.1 General**	
9.1.1 Scope In accordance with the requirements in **Annex 3.2, Part 1, Part C of the Rules for the Survey and Construction of Steel Ships**, the requirements in this Chapter apply to tests and inspection for the type approval of fiber reinforced plastic (hereinafter referred to as "FRP").	**9.1.1 Scope** In accordance with the requirements in **Annex 3.2, Part 1, Part C of the Rules for the Survey and Construction of Steel Ships**, the requirements in this Chapter apply to tests and inspection for the approval of use of fiber reinforced plastic (hereinafter referred to as "FRP").	Terminology alignment
9.2 Application Procedure	**9.2 Application Procedure**	
9.2.1 Approval Application Manufacturers who wish to obtain type approval of FRP products are to submit the appropriate application form (**Form 2-10**) and, as shown in **9.2.3**, any drawings and documents as well as the test plan to either the Society's main office or a branch office.	**9.2.1 Approval Application** Manufacturers who wish to obtain approval to use FRP products are to submit the appropriate application form (**Form 2-10**) and, as shown in **9.2.3**, three copies of any drawings and documents as well as three copies of the test plan to either the Society's main office or a branch office.	Terminology alignment To delete the specification of the number of copies due to digitization
9.5 Notice of Approval	**9.5 Notice of Approval**	
9.5.3 Renewal of Approval **1** In case of application for renewal of approval, the applicant is to submit "Certificate of Approval" and data	**9.5.3 Renewal of Approval** **1** In case of application for renewal of approval, the applicant is to submit a copy of "Certificate of Approval" and	Terminology alignment

Amended	Original	Remarks
showing actual manufacturing records of the FRP within the specific period of time together with the appropriate application from (**Form 2-10**).	three copies of data showing actual manufacturing records of the FRP within the specific period of time together with the appropriate application from (**Form 2-10**).	
9.5.4 Changes in Approval Content **1** In case of changes to an approved FRP, the applicant is to submit the "Certificate of Approval" and the documents specified in **9.2.3** together with the appropriate application form (**Form 2-10**).	**9.5.4 Changes in Approval Content** **1** In case of changes to an approved FRP, the applicant is to submit a copy of the "Certificate of Approval" and three copies of the documents specified in **9.2.3** together with the appropriate application form (**Form 2-10**).	To delete the specification of the number of copies due to digitization
Chapter 10 TYPE APPROVAL OF SHIPBOARD INCINERATOR	**Chapter 10 SHIPBOARD INCINERATOR**	Terminology alignment
10.2 Application Procedure	**10.2 Application Procedure**	
10.2.3 Documents **1** The data given in the following **(1)** through **(7)** are to be submitted together with the Application Form referred to in **10.2.1**. ((1) to (7) are omitted.)	**10.2.3 Documents** **1** Three copies of the data given in the following **(1)** through **(7)** are to be submitted together with the Application Form referred to in **10.2.1**. ((1) to (7) are omitted.)	To delete the specification of the number of copies due to digitization
10.5 Approval	**10.5 Approval**	
10.5.1 Test Records After completion of the approval test, the manufacturer is to produce records of approval test, and is to	**10.5.1 Test Records** After completion of the approval test, the manufacturer is to produce records of approval test, and is to	To delete the specification of the number of copies due to digitization

Amended	Original	Remarks
submit it to the Society upon receiving confirmation by the Society's Surveyor.	submit three copies to the Society upon receiving confirmation by the Society's Surveyor.	
Chapter 11 TYPE APPROVAL OF BALLAST WATER MANAGEMENT SYSTEMS	**Chapter 11 BALLAST WATER MANAGEMENT SYSTEMS**	Terminology alignment
11.2 Approval Application	**11.2 Approval Application**	
11.2.2 Documents to be Submitted **1** The drawings and documents listed below are to be submitted together with the application specified in **11.2.1**. ((1) to (9) are omitted.)	**11.2.2 Documents to be Submitted** **1** The drawings and documents listed below are to be submitted in triplicate together with the application specified in **11.2.1**. ((1) to (9) are omitted.)	To delete the specification of the number of copies due to digitization
11.5 Approval Test	**11.5 Approval Test**	
11.5.5 Land-based Testing **3** Influent Water ((1) to (3) are omitted.) (4) For any given set of test cycles (five are considered a set) a salinity range is to be chosen for each cycle. Given the salinity of the test set up for a test cycle in fresh, brackish and marine water, each is to have dissolved and particulate content in one of the following combinations in **Table 3.11-1**. Deviations from the marine and brackish salinity ranges of the	**11.5.5 Land-based Testing** **3** Influent Water ((1) to (3) are omitted.) (4) For any given set of test cycles (five are considered a set) a salinity range is to be chosen for each cycle. Given the salinity of the test set up for a test cycle in fresh, brackish and marine water, each is to have dissolved and particulate content in one of the following combinations in **Table 2.11-1**. Deviations from the marine and brackish salinity ranges of the	

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Amended	Original	Remarks
table are to be reported and justified and the resulting tests are not to be less challenging for the *BWMS* than would be the circumstance if the deviations had not occurred: [Annex / 2.29] (5) (Omitted) (6) The *BWMS* is to be tested in conditions for which it will be approved. For a *BWMS* to achieve an unlimited Type Approval Certificate specified in **11.6.2** with respect to salinity, one set of test cycles is to be conducted within each of the three salinity ranges with the associated dissolved and particulate content as prescribed in **Table 3.11-2**. Tests under adjacent salinity ranges in the above table are to be separated by at least 10 *PSU* (*Practical Salinity Unit*). [Annex / 2.31] **4** Test Items The methods and acceptance criteria for land-based testing are specified in **Table 3.11-2**. Table 3.11-1 Influent Water (Table is omitted.)	table are to be reported and justified and the resulting tests are not to be less challenging for the *BWMS* than would be the circumstance if the deviations had not occurred: [Annex / 2.29] (5) (Omitted) (6) The *BWMS* is to be tested in conditions for which it will be approved. For a *BWMS* to achieve an unlimited Type Approval Certificate specified in **11.6.2** with respect to salinity, one set of test cycles is to be conducted within each of the three salinity ranges with the associated dissolved and particulate content as prescribed in **Table 2.11-2**. Tests under adjacent salinity ranges in the above table are to be separated by at least 10 *PSU* (*Practical Salinity Unit*). [Annex / 2.31] **4** Test Items The methods and acceptance criteria for land-based testing are specified in **Table 2.11-2**. Table 2.11-1 Influent Water (Table is omitted.)	Figure and table numbers have been changed due to reorganization

Amended-Original Requirements Comparison Table
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<table>
<tr><th>Amended</th><th>Original</th><th>Remarks</th></tr>
<tr><td colspan="2">Table 3.11-2 Methods and Acceptance Criteria for Land-based Testing
<table>
<tr><th>Test Items</th><th>Test Method</th><th>Acceptance Criteria</th></tr>
<tr><td colspan="3">(Omitted)</td></tr>
<tr><td>Land-based Testing</td><td>(b) The sample may not be concentrated for analysis unless the procedure is validated. Only organisms greater than 10 μm and less than 50 μm in minimum dimension are to be enumerated.
(c) The full volume of the sample is to be analysed unless the total number of organisms is high, e.g. 100. In this case, the average density may be extrapolated based on a well-mixed subsample using a validated method;
(3) For the evaluation of bacteria: [Annex / 2.43.3]
(a) For the influent and discharge samples, a minimum 10 l sample referred to in -2(2)(a) of test method in Table 3<s>2</s>.11-3, or another sample at least 10 l in volume and collected in a similar manner, a sub-sample of minimum 1 l may be transferred to a sterile container for analysis;
(b) A minimum of three, subsamples of appropriate volume taken from the 1 l subsample described above (a) are to be analysed for colony forming units of bacteria listed in the ballast water performance standard.
(4) The samples are to be analysed for viable organisms within 6 hours of being taken or treated in such a way so as to ensure that proper analysis can be performed. [Annex / 2.44]</td><td>Ditto</td></tr>
</table></td><td>Figure and table numbers have been changed due to reorganization</td></tr>
<tr><td>11.5.6 Shipboard Testing
During shipboard testing, it is to be verified that the entire BWMS is in good working order and complies with the ballast water performance standard on a ship in which it is actually in use.</td><td>11.5.6 Shipboard Testing
During shipboard testing, it is to be verified that the entire BWMS is in good working order and complies with the ballast water performance standard on a ship in which it is actually in use.</td><td>Figure and table numbers have been changed due to reorganization</td></tr>
</table>

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
(1) Testing Requirements (a) (Omitted) (b) In evaluating the performance of *BWMS* installation(s) on a ship or ships, the following information and results are to be supplied to the satisfaction of the Society. [Annex / 2.8] (i) to v) are omitted.) vi) Sampling regime and volumes for analysis(refer to -2 in **Table 3.11-3**): [Annex / 2.8.6] (2) Test Items The test method and acceptance criteria are shown in **Table 3.11-3**. Table 3.11-3 Test Method and Acceptance Criteria of Shipboard Testing (Table is omitted.)	(1) Testing Requirements (a) (Omitted) (b) In evaluating the performance of *BWMS* installation(s) on a ship or ships, the following information and results are to be supplied to the satisfaction of the Society. [Annex / 2.8] (i) to v) are omitted.) vi) Sampling regime and volumes for analysis(refer to -2 in **Table 2.11-3**): [Annex / 2.8.6] (2) Test Items The test method and acceptance criteria are shown in **Table 2.11-3**. Table 2.11-3 Test Method and Acceptance Criteria of Shipboard Testing (Table is omitted.)	Figure and table numbers have been changed due to reorganization
11.6 Approval	**11.6 Approval**	
11.6.1 Test Records **1** The manufacturer is to prepare records of the approval test after completion of the test, to obtain verification by the Society's attending surveyor and then to submit them, to the Society. Then, following items are to be incorporated. ((1) to (14) are omitted.)	**11.6.1 Test Records** **1** The manufacturer is to prepare records of the approval test after completion of the test, to obtain verification by the Society's attending surveyor and then to submit them, in triplicate, to the Society. Then, following items are to be incorporated. ((1) to (14) are omitted.)	To delete the specification of the number of copies due to digitization
2 The results of biological efficacy testing of the *BWMS* are to be accepted if during the land-based and shipboard testing conducted as specified in sections "Shipboard tests"	**2** The results of biological efficacy testing of the *BWMS* are to be accepted if during the land-based and shipboard testing conducted as specified in sections "Shipboard tests"	

Amended	Original	Remarks
specified in **11.5.6** and "Land-based testing" specified in **11.5.5** it is shown that the system has met the ballast water performance standards and that the uptake water quality requirements were met in all individual test cycles as provided in [Annex / 4.7.1] to [Annex / 4.7.2] in **Table 3.11-2** and **Table 3.11-3**. [Annex / 2.58]	specified in **11.5.6** and "Land-based testing" specified in **11.5.5** it is shown that the system has met the ballast water performance standards and that the uptake water quality requirements were met in all individual test cycles as provided in [Annex / 4.7.1] to [Annex / 4.7.2] in **Table 2.11-2** and **Table 2.11-3**. [Annex / 2.58]	
Chapter 12 TYPE APPROVAL OF CONTAINER SECURING FITTINGS	**Chapter 12 APPROVAL OF CONTAINER SECURING FITTINGS**	
12.1 General	**12.1 General**	
12.1.1 Application Type approval procedures for fittings specified in **9.1.5, Part L of the Rules for the Survey and Construction of Steel Ships** are to be in accordance with this chapter.	**12.1.1 Application** Approval procedures for fittings specified in **9.1.5, Part L of the Rules for the Survey and Construction of Steel Ships** are to be in accordance with this chapter.	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Part 4 WELDING CONSUMABLES	**Part 3 WELDING CONSUMABLES**	To align with the structure of other rules, the General Provisions are designated as Part 1, and the former Parts 1 to 4 are reorganized accordingly.
Chapter 1 TYPE APPROVAL OF WELDING CONSUMABLES	**Chapter 1 APPROVAL OF WELDING CONSUMABLES**	Terminology alignment
1.1 General	**1.1 General**	
1.1.1 Scope In accordance with the requirements in **6.1.3** and **6.1.4, Part M of Rules for the Survey and Construction of Steel Ships** (hereinafter referred to as "the Rules"), the requirements in this chapter apply to tests and inspection regarding type approval of welding consumables.	**1.1.1 Scope** In accordance with the requirements in **6.1.3** and **6.1.4, Part M of Rules for the Survey and Construction of Steel Ships** (hereinafter referred to as "the Rules"), the requirements in this chapter apply to tests and inspection for the purpose of treating welding consumables as approved welding consumables.	Terminology alignment
1.2 Approval Application	**1.2 Approval Application**	
1.2.1 Approval Application Form Manufacturers wishing to obtain approval are to submit to the Society (Branch Office) the appropriate application form (**Form 3-1**), which includes for each manufacturing plant the brands of the welding consumables (for submerged arc welding consumables, each brand of core wire and combination flux), kind, symbol, purpose,	**1.2.1 Approval Application Form** Manufacturers wishing to obtain approval are to submit to the Society (Branch Office) a single copy of the appropriate application form (**Form 3-1**), which includes for each manufacturing plant the brands of the welding consumables (for submerged arc welding consumables, each brand of core wire and combination flux), kind, symbol,	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
maximum core wire diameter produced and the maximum quantity hydrogen (this is limited to non-low-hydrogen electrodes for high tensile sheets), together with each of documents and data specified in **1.2.3**.	purpose, maximum core wire diameter produced and the maximum quantity hydrogen (this is limited to non-low-hydrogen electrodes for high tensile sheets), together with two copies each of documents and data specified in **1.2.3**.	
1.4 Approval Tests	**1.4 Approval Tests**	
1.4.3 Test Records After completion of the approval test, the manufacturer is to produce records of approval test and is to submit them to the Society (Branch Office) upon receiving confirmation by the attending surveyor.	**1.4.3 Test Records** After completion of the approval test, the manufacturer is to produce records of approval test and is to submit three copies of them to the Society (Branch Office) upon receiving confirmation by the attending surveyor.	To delete the specification of the number of copies due to digitization
1.5 Approval	**1.5 Approval**	
1.5.1 Notification of Approval The Society examines the submitted test record and results of confirmation survey, and if found satisfactory, the welding consumables shall be approved and an approval certificate specifying the approval number, date of approval, type, model, and other relevant particulars shall be issued for each brand. The date of issue of the approval certificate is to be coincided with the date of completion of the approval test.	**1.5.1 Notification of Approval** The Society examines the submitted test record and results of confirmation survey, and if found satisfactory, the welding consumables shall be approved and an approval certificate shall be issued to each brand. The date of issue of the approval certificate is to be coincided with the date of completion of the approval test.	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
1.6 Annual Inspection	**1.6 Annual Inspection**	
1.6.3 Test Records After completion of the test in annual inspection, the manufacturer is to prepare test reports and submit them to the Society (Branch Office) upon receiving confirmation by the attending surveyor.	**1.6.3 Test Records** After completion of the test in annual inspection, the manufacturer is to prepare two copies of test reports and submit them to the Society (Branch Office) upon receiving confirmation by the attending surveyor.	To delete the specification of the number of copies due to digitization
1.7 Change in the Approval Content	**1.7 Change in the Approval Content**	
1.7.1 Application for Change **1** In case when the particulars of the welding consumables which being mentioned in the certificate of approval, such as grade, welding position, maximum diameter of electrodes or shield gas, is changed, the manufacturer is to submit the appropriate application form (**Form 3-1**) for change together with necessary data to the Society (Branch Office), and necessary additional approval tests are to be carried out accordingly.	**1.7.1 Application for Change** **1** In case when the particulars of the welding consumables which being mentioned in the certificate of approval, such as grade, welding position, maximum diameter of electrodes or shield gas, is changed, the manufacturer is to submit a single copy of the appropriate application form (**Form 3-1**) for change together with two copies of necessary data to the Society (Branch Office), and necessary additional approval tests are to be carried out accordingly.	To delete the specification of the number of copies due to digitization
2 When the significant changes in compositions or manufacturing process of the wire and flux or removal of manufacturing plant is made, the manufacturer is to submit notification of alternation in any preferred form together with necessary data to the Society (Branch Office), and necessary confirmation survey and test may be carried out accordingly.	**2** When the significant changes in compositions or manufacturing process of the wire and flux or removal of manufacturing plant is made, the manufacturer is to submit a single copy of notification of alternation in any preferred form together with three copies of necessary data to the Society (Branch Office), and necessary confirmation survey and test may be carried out accordingly.	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
1.10 Reduction of Approval Test for the Same Brand of Approved Consumables	**1.10 Reduction of Approval Test for the Same Brand of Approved Consumables**	Terminology alignment
1.10.1 Approval Application In case when the manufacturer request reduction of part of approval test under the provisions of **6.1.3-4** and **-5, Part M of the Rules**, the manufacturer is to submit the appropriate application form (**Form 3-1**) with descriptions for this reduction and the following data to the Society (Head office). ((1) to (5) are omitted.)	**1.10.1** In case when the manufacturer request reduction of part of approval test under the provisions of **6.1.3-4** and **-5, Part M of the Rules**, the manufacturer is to submit the appropriate application form (**Form 3-1**) with descriptions for this reduction and three copies of the following data to the Society (Head office). ((1) to (5) are omitted.)	Terminology alignment To delete the specification of the number of copies due to digitization
1.10.2 Approval Test Plan The society studies the application and data being submitted and, if deemed appropriate, may permit the reduced approval test at least equivalent to annual test. In this case the approval test plan will be approved and returned to the manufacturer.	**1.10.2** The society studies the application and data being submitted and, if deemed appropriate, may permit the reduced approval test at least equivalent to annual test. In this case the approval test plan will be approved and returned to the manufacturer.	Terminology alignment
1.11 Approval Test and Annual Inspection for Welding Consumables which are Not Specified in the Rules	**1.11 Approval Test and Annual Inspection for Welding Consumables which are Not Specified in the Rules**	
1.11.1 Approval Test **1** The manufacturer, who wishes the approval of welding consumables to which the provisions in **6.1.3-3, Part M of the Rules** has been applied, is to submit the appropriate application form (**Form 3-1**) and the following data to the Society (Head office). ((1) to (3) are omitted.)	**1.11.1 Approval Test** **1** The manufacturer, who wishes the approval of welding consumables to which the provisions in **6.1.3-3, Part M of the Rules** has been applied, is to submit the appropriate application form (**Form 3-1**) and three copies of the following data to the Society (Head office). ((1) to (3) are omitted.)	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
Part 5 NON-METALLIC MATERIALS AND COATING MATERIALS FOR HULL	**Part 4 NON-METALLIC MATERIALS AND COATING MATERIALS FOR HULL**	
Chapter 1 TYPE APPROVAL OF FIRE PROTECTION MATERIALS	**Chapter 1 APPROVAL OF FIRE PROTECTION MATERIALS**	Terminology alignment
1.1 General	**1.1 General**	
1.1.1 Scope **1** The requirements of this Chapter apply to the tests and inspections for the type approval of fire protection material specified in **(1)** through **(12)** below in accordance with the requirements of **Part P** and **Part R of the Rules for the Survey and Construction of Steel Ships** (hereinafter referred to as "the Rules"). ((1) to (12) are omitted.)	**1.1.1 Scope** **1** The requirements of this Chapter apply to the tests and inspections for the approval of fire protection material specified in **(1)** through **(12)** below in accordance with the requirements of **Part P** and **Part R of the Rules for the Survey and Construction of Steel Ships** (hereinafter referred to as "the Rules"). ((1) to (12) are omitted.)	Terminology alignment
1.4 Application Procedure for Approval	**1.4 Application Procedure for Approval**	
1.4.1 Application Form for Approval **1** When obtaining the approval of fire protection materials except fire retardant coatings, the appropriate application form (**Form 4-1**) accompanied by the documents specified in **1.4.3-1** is submitted to the Society (Head Office).	**1.4.1 Application Form for Approval** **1** When obtaining the approval of fire protection materials except fire retardant coatings, the appropriate application form (**Form 4-1**) accompanied by the documents specified in **1.4.3-1** (one for each item) is submitted to the Society (Head Office).	To delete the specification of the number of copies due to digitization
2 When obtaining the approval for fire retardant coatings, the appropriate application form (**Form 4-2 5**)	**2** When obtaining the approval for fire retardant coatings, the appropriate application form (**Form 4-2 5**)	To delete the specification of the number of copies

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
accompanied by the documents specified in **1.4.3-2** is submitted to the Society (Head Office).	accompanied by the documents specified in **1.4.3-2** (one for each item) is submitted to the Society (Head Office).	due to digitization
1.7 Notice of Approval	**1.7 Notice of Approval**	
1.7.1 Notice of Approval **1** The Society issues the *Certificate of Approval* specifying the approval number, date of approval, type, model, and other relevant particulars, in accordance with the *FTP* Code after having approved the material by the general judgment on the basis of the results of examination of the submitted documents and the results of the confirmatory survey of manufacturer for approval and approval tests.	**1.7.1 Notice of Approval** **1** The Society issues the *Certificate of Approval for Fire Protection Material* in accordance with the *FTP* Code after having approved the material by the general judgment on the basis of the results of examination of the submitted documents and the results of the confirmatory survey of manufacturer for approval and approval tests.	Terminology alignment The approval certificate for fire protection materials include the approval number, date of approval, type, model, and other relevant details
2 When the Society approves watertightness or gas-tightness in accordance with **1.3.2-2** and **1.3.3-2**, such information may be added to the *Certificate of Approval* by the Society along with the approved maximum design pressure. In cases where maximum design pressure is different for each installation, each design pressure is to be indicated.	**2** When the Society approves watertightness or gas-tightness in accordance with **1.3.2-2** and **1.3.3-2**, such information may be added to the *Certificate of Approval for Fire Protection Material* by the Society along with the approved maximum design pressure. In cases where maximum design pressure is different for each installation, each design pressure is to be indicated.	Terminology alignment
1.7.2 Validity of Certificate of Approval The valid term of the *Certificate of Approval* is five *years* from the date of approval.	**1.7.2 Validity of Certificate of Approval for Fire Protection Material** The *Certificate of Approval for Fire Protection Material* is valid for five *years*.	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
1.10 Periodical Test	**1.10 Periodical Test**	
1.10.1 Interval of Periodical Test Periodical test is carried out before or on the expiry date of the *Certificate of Approval*.	**1.10.1 Interval of Periodical Test** Periodical test is carried out before or on the expiry date of the *Certificate of Approval for Fire Protection Material*.	Terminology alignment
1.10.2 Periodical Tests for Approved Materials other than Fire Retardant Coatings **1** The appropriate application form (**Form 4-3**) accompanied with necessary the records of manufacture and the specifications of the products specified in **1.4.3-1(6)** is submitted to the Society (Head Office).	**1.10.2 Periodical Tests for Approved Materials other than Fire Retardant Coatings** **1** The appropriate application form (**Form 4-3**) accompanied with necessary copies of the records of manufacture and the specifications of the products specified in **1.4.3-1(6)** is submitted to the Society (Head Office).	To delete the specification of the number of copies due to digitization
1.10.3 Periodical Test for Fire Retardant Coatings **1** The appropriate application form (**Form 4-4**) accompanied by necessary the records of manufacture and the list of coating system and the table of chemical composition specified in **1.4.3-3(5)** and **(6)** respectively is submitted to the Society (Head Office).	**1.10.3 Periodical Test for Fire Retardant Coatings** **1** The appropriate application form (**Form 4-4**) accompanied by necessary copies of the records of manufacture and the list of coating system and the table of chemical composition specified in **1.4.3-3(5)** and **(6)** respectively is submitted to the Society (Head Office).	To delete the specification of the number of copies due to digitization
1.10.4 Notice of Renewal **1** The Society issues the *Certificate of Approval* which is valid for five *years* from the date of completion of the periodical tests when the Society ascertains continuous compliance with the type approval conditions by the review of the test report of the periodical tests specified in **1.10.2** or **1.10.3**.	**1.10.4 Notice of Renewal** **1** The Society issues the *Certificate of Approval for Fire Protection Material* which is valid for five *years* from the date of completion of the periodical tests when the Society ascertains continuous compliance with the type approval conditions by the review of the test report of the periodical tests specified in **1.10.2** or **1.10.3**.	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Chapter 2 TYPE APPROVAL OF INSULATION MATERIALS FOR REFRIGERATED CHAMBERS AND OIL-IMPERVIOUS COVERINGS	**Chapter 2 TYPE APPROVAL OF MATERIALS FOR INSULATION AND OIL-IMPERVIOUS COVERINGS**	Terminology alignment
2.1 General	**2.1 General**	
2.1.1 Scope	**2.1.1 Scope**	
The requirements in this chapter apply to tests and inspection for the type approval of materials intended to be used for insulating the refrigerated chambers and oil-impervious composition provided for the surface of oil tanks adjacent refrigerated chambers (hereinafter referred to as "oil-impervious covering") in accordance with the requirements of **5.2.1-1** and **5.2.5 of the Rules for Cargo Refrigerating Installations**.	**1** The requirements in this chapter apply to tests and inspection for the type approval of materials intended to be used for insulating the refrigerated chambers and oil-impervious composition provided for the surface of oil tanks adjacent refrigerated chambers (hereinafter referred to as "oil-impervious covering") in accordance with the requirements of **5.2.1-1** and **5.2.5 of the Rules for Cargo Refrigerating Installations**.	
(Delete)	**2** Tests and inspections related to the type approval of materials intended to be used for the insulation of ships carrying liquefied gases in bulk requiring Society approval in accordance with the requirements of **Chapter 4, Part N of the Rules for the Survey and Construction of Steel Ships** are to follow the requirements specified in this chapter.	In order to add "TYPE APPROVAL OF INSULATION MATERIALS USED IN CARGO CONTAINMENT SYSTEMS FOR LIQUEFIED GASES" to Chapter 7, Part 5 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use, the current requirement have been deleted.(Transfer from Annex 1 of Part N and

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
		GF.)
(Delete)	**3** Tests and inspections related to the type approval of materials intended to be used for the insulation of ships using low-flashpoint fuels requiring Society approval in accordance with the requirements of **Chapter 6, Part GF of the Rules for the Survey and Construction of Steel Ships** are to follow the requirements specified in this chapter.	
2.2 Application Procedures	**2.2 Application Procedures**	
2.2.1 Procedures Application for type approval is to be made to the Society (Head Office) using an application form (**Form 4-6**) together with each of the documents specified in **2.2.4**.	**2.2.1 Procedures** Application for type approval is to be made to the Society (Head Office) using an application form (**Form 4-6**) together with 3 copies each of the documents specified in **2.2.4**.	To delete the specification of the number of copies due to digitization
2.2.3 Applicant Material manufacturer is, in general, to be the applicant for approval except where the applicant other than manufacturer has final responsibility for the quality of products.	**2.2.3 Applicant** Material manufacturer is, in general, to be the applicant for type approval except where the applicant other than manufacturer has final responsibility for the quality of products.	Terminology alignment
2.2.5 Omission of Documents (1) The manufacturers, who have the products already approved according to the requirements of this chapter, may omit submission of the documents which is a duplicate of those examined at previous approval if they so indicate. (2) (Omitted)	**2.2.5 Omission of Documents** (1) The manufacturers, who have the products already approved according to the requirements of this chapter, may omit submission of the documents which is a duplicate of those examined at previous type approval if they so indicate. (2) (Omitted)	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
2.4 Approval Test	**2.4 Approval Test**	Terminology alignment
2.4.1 General	**2.4.1 General**	
((1) to (4) are omitted.)	((1) to (4) are omitted.)	Terminology alignment
(5) The test record are to be submitted to the Society.	(5) Two copies of the test record are to be submitted to the Society.	
(6) (Omitted)	(6) (Omitted)	
2.4.2 Insulation Materials	**2.4.2 Insulation Materials**	
(1) The items represented by mark ○ in **Table 5.2-1** are to be tested for the insulation materials. However, materials not given in the table are to be considered in each case.	(1) The items represented by mark ○ in **Table 4.2-1** are to be tested for the insulation materials. However, materials not given in the table are to be considered in each case.	
(2) (Omitted)	(2) (Omitted)	In order to add "TYPE APPROVAL OF INSULATION MATERIALS USED IN CARGO CONTAINMENT SYSTEMS FOR LIQUEFIED GASES" to Chapter 7, Part 5 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use, the current requirement have been deleted.(Transfer from Annex 1 of Part N and GF.)
(Delete)	(3) The test items and testing procedure, etc. for materials intended to be used for the insulation of ships carrying liquefied gases in bulk are to comply with the requirements in the “Guidance for Equipment and Fittings of Ships Carrying Liquefied Gases in Bulk”.	
(Delete)	(4) The test items and testing procedure, etc. for materials intended to be used for the insulation of ships using low-flashpoint fuels are to comply with the requirements in the “Guidance for Equipment and Fittings of Ships Using Low-flashpoint Fuels”.	
Table 5.2-1 Approval Test Items of Insulation Materials (Table is omitted.)	Table 4.2-1 Approval Test Items of Insulation Materials (Table is omitted.)	Figure and table numbers have been changed due to

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
		reorganization
2.4.3 Oil-impervious Covering (1) Tank top covering The test items and testing procedure given in **Table 5.2-2** are to be carried out for the tank top covering. (2) Tank side covering The tests are to be carried out in accordance with requirements specified in **Table 5.2-2**. In addition to these tests, the tests given in **Table 5.2-3** are to be carried out for the tank side covering.	**2.4.3 Oil-impervious Covering** (1) Tank top covering The test items and testing procedure given in **Table 4.2-2** are to be carried out for the tank top covering. (2) Tank side covering The tests are to be carried out in accordance with requirements specified in **Table 4.2-2**. In addition to these tests, the tests given in **Table 4.2-3** are to be carried out for the tank side covering.	Figure and table numbers have been changed due to reorganization
Table 5.2-2 Approval Test Items and Testing Procedure for Tank Top Covering for Oil Tanks (Table is omitted.)	Table 4.2-2 Approval Test Items and Testing Procedure for Tank Top Covering for Oil Tanks (Table is omitted.)	Figure and table numbers have been changed due to reorganization
Table 5.2-3 Approval Test Items and Testing Procedure for Tank Side Covering (Table is omitted.)	Table 4.2-3 Approval Test Items and Testing Procedure for Tank Side Covering (Table is omitted.)	Figure and table numbers have been changed due to reorganization
2.5 Certificate of Approval	**2.5 Certificate of Type Approval**	
When the Society is satisfied with the results of the examination of the documents submitted, the survey specified in **2.3** and the approval test specified in **2.4**, the Society issue the Certificate of Approval specifying the approval number, date of approval, type, model, and other relevant particulars, for Materials for Refrigerated Chambers. The valid term of the Certificate is remained for 5 *years* from the date of issue.	When the Society is satisfied with the results of the examination of the documents submitted, the survey specified in **2.3** and the approval test specified in **2.4**, the Society issue the Certificate of Type Approval for Materials for Refrigerated Chambers. The valid term of the Certificate is remained for 5 *years* from the date of issue.	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
2.6 Markings	**2.6 Markings**	
The marking and packaging are to be as shown in the documents attached to the application for the approval and no changes are to be made without agreement by the Society. The approval number is to be indicated to declare the approval by the Society.	The marking and packaging are to be as shown in the documents attached to the application for the type approval and no changes are to be made without agreement by the Society. The approval number is to be indicated to declare the type approval by the Society.	Terminology alignment
2.8 Periodical Examination	**2.8 Periodical Examination**	
2.8.3 Renewal of the Certificate of Approval When the results of the periodical examination are considered are considered acceptable to the Society, the Society reissues the Certificate of Approval for Materials for Refrigerated Chambers specified **2.5**.	**2.8.3 Renewal of the Certificate of Type Approval** When the results of the periodical examination are considered are considered acceptable to the Society, the Society reissues the Certificate of Type Approval for Materials for Refrigerated Chambers specified **2.5**.	Terminology alignment
2.9 Revocation of Approval	**2.9 Revocation of Type Approval**	
2.9.1 Revocation of Approval Approval be revoked if any of the following cases is found relevant. (1) When doubt occurs on the performance of the approved material as a result of the service record. (2) When the manufacturer is not subjected to the periodical examination. (3) When the material failed to pass the periodical examination. (4) When the manufacturer offers to stop manufacturing	**2.9.1 Revocation of Type Approval** Type approval be revoked if any of the following cases is found relevant. (1) When doubt occurs on the performance of the approved material as a result of the service record. (2) When the manufacturer is not subjected to the periodical examination. (3) When the material failed to pass the periodical examination. (4) When the manufacturer offers to stop manufacturing	Terminology alignment

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
the material. (5) When the manufacturer requests to withdraw the type approval.	the material. (5) When the manufacturer requests to withdraw the type approval.	
Chapter 3 TYPE APPROVAL OF RAW MATERIALS FOR HULL OF SHIPS OF FIBREGLASS REINFORCED PLASTICS	**Chapter 3 APPROVAL OF RAW MATERIALS FOR HULL OF SHIPS OF FIBREGLASS REINFORCED PLASTICS**	Terminology alignment
3.1 Scope	**3.1 Scope**	
3.1.1 Application This chapter applies to the type approval and retention of type approval of the raw materials to be used in the following **(1)** through **(4)** for FRP boats conforming to the requirements of **4.2.1 of the Rules for the Survey and Construction of Ships of Fibreglass Reinforced Plastics**: ((1) to (4) are omitted.)	**3.1.1 Application** This chapter applies to the approval and retention of approval of the raw materials to be used in the following **(1)** through **(4)** for FRP boats conforming to the requirements of **4.2.1 of the Rules for the Survey and Construction of Ships of Fibreglass Reinforced Plastics**: ((1) to (4) are omitted.)	Terminology alignment
3.2 Approval Application Procedures	**3.2 Approval Application Procedures**	Terminology alignment
3.2.1 Application for Approval Manufacturer who intends to obtain approval is to submit the appropriate application form in duplicate, stating the brand name and type of raw materials (**Form 4-8**) accompanied by the reference materials and data, as shown in **3.2.3** to the Society (Head Office).	**3.2.1 Application for Approval** Manufacturer who intends to obtain approval is to submit the appropriate application form in duplicate, stating the brand name and type of raw materials (**Form 4-8**) accompanied by the reference materials and data, each in duplicate, as shown in **3.2.3** to the Society (Head Office).	To delete the specification of the number of copies due to digitization

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Amended	Original	Remarks
3.5 Notification of Approval	**3.5 Notification of Approval**	Terminology alignment
3.5.1 Submission of Approval Test Records On completion of tests, the applicant is to submit the approval test records, with the signature of the surveyor who attended the tests obtained thereon, to the Society (Branch Office).	**3.5.1 Submission of Approval Test Records** On completion of tests, the applicant is to submit the approval test records, <u>in triplicated,</u> with the signature of the surveyor who attended the tests obtained thereon, to the Society (Branch Office).	Terminology alignment To delete the specification of the number of copies due to digitization
3.5.2 Issue of Approval Certificate The Society approves the items of material on finding the results of approval tests and confirmation survey to be satisfactory after examining them and issues approval certificates <u>specifying the approval number, date of approval, type, model, and other relevant particulars</u> for each brand of products for each manufacturer who has applied for approval.	**3.5.2 Issue of Approval Certificate** The Society approves the items of material on finding the results of approval tests and confirmation survey to be satisfactory after examining them and issues approval certificates for each brand of products for each manufacturer who has applied for approval.	Terminology alignment
3.6 Periodical Tests	**3.6 Periodical Tests**	
3.6.2 Application for Periodical Test The manufacturer is to submit the appropriate application form (**Form 4-9**), to the Society (Branch Office) before the date of periodical test.	**3.6.2 Application for Periodical Test** The manufacturer is to submit the appropriate application form (**Form 4-9**), <u>in duplicate,</u> to the Society (Branch Office) before the date of periodical test.	
3.6.5 Submission of Test Records On successful completion of periodical test, the manufacturer is to submit the test results, with the attending surveyor's signature on them to the Branch Office of the Society concerned.	**3.6.5 Submission of Test Records** On successful completion of periodical test, the manufacturer is to submit the test results, <u>in duplicate,</u> with the attending surveyor's signature on them to the Branch Office of the Society concerned.	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
3.6.6 Renewal of Validity of Certificate For the approved materials that passed the periodical test, the Society (Branch Office) makes renewal of the validity of the certificate. The validity is, irrespective of the date of completion of the periodical test, to be one *year* from the next day of expiry of the previous validity.	**3.6.6 Renewal of Validity of Certificate** For the approved materials that passed the periodical test, the Society (Branch Office) makes renewal of the validity of the certificate. The validity is, irrespective of the date of completion of the periodical test, to be full one *year* counting from the next day of expiry of the previous validity.	Terminology alignment
Chapter 4 TYPE APPROVAL OF COATING SYSTEM	**Chapter 4 APPROVAL OF COATING SYSTEM**	Terminology alignment
4.1 General	**4.1 General**	
4.1.1 Application **1** The requirements of this chapter apply to tests and inspection for type approval of coating system specified in **(1)(a)** or **(2)(a), item1, Table B2.10, Part B of the Rules for the Survey and Construction of Steel Ships** or **2.1.9-2(1), Part 2, Guidance for the Survey and Construction of Passenger Ships**.	**4.1.1 Application** **1** The requirements of this chapter apply to tests and inspection for approval of coating system specified in **(1)(a)** or **(2)(a), item1, Table B2.10, Part B of the Rules for the Survey and Construction of Steel Ships** or **2.1.9-2(1), Part 2, Guidance for the Survey and Construction of Passenger Ships**.	Terminology alignment
4.2 Application Procedures	**4.2 Application Procedures**	Terminology alignment
4.2.1 Application for Approval Manufacturer who intends to obtain approval is to submit the appropriate application form stating the type and	**4.2.1 Application for Approval** Manufacturer who intends to obtain approval is to submit the appropriate application form stating the type and	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
uses of the coating system (**Form 4-14**), the documents specified in **4.2.2** and the test plan to the Society (one of its branches).	uses of the coating system (**Form 4-14**), three copies of the documents specified in **4.2.2** and three copies of the test plan to the Society (one of its branches).	
4.5 Notice of Approval	**4.5 Notice of Approval**	Terminology alignment
4.5.3 Renewal of Approval **1** In case of application for renewal of approval, the applicant is to submit a "Certificate of Approval" (copy) and the data showing actual manufacturing records of the coating constituted coating system within the specific period together with the appropriate application from (**Form 4-14**).	**4.5.3 Renewal of Approval** **1** In case of application for renewal of approval, the applicant is to submit a "Certificate of Approval" (copy) and three copies of the data showing actual manufacturing records of the coating constituted coating system within the specific period together with the appropriate application from (**Form 4-14**).	To delete the specification of the number of copies due to digitization
4.5.4 Changes in Approval Content **1** In case of changes to an approved system, the applicant is to submit the "Certificate of Approval" (copy) and the documents specified in **4.2.2** together with the appropriate application form (**Form 4-14**).	**4.5.4 Changes in Approval Content** **1** In case of changes to an approved system, the applicant is to submit the "Certificate of Approval" (copy) and three copies of the documents specified in **4.2.2** together with the appropriate application form (**Form 4-14**).	Terminology alignment To delete the specification of the number of copies due to digitization

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Amended	Original	Remarks
Chapter 5 TYPE APPROVAL OF NON-METALLIC BEARING MATERIAL FOR RUDDERS	**Chapter 5 APPROVAL OF MANUFACTURING PROCESS OF NON-METALLIC BEARING MATERIAL FOR RUDDERS**	Terminology alignment
5.1 General	**5.1 General**	
5.1.1 Scope This chapter applies to the testing and inspection for the type approval of non-metallic bearing material for rudders specified in the requirements of **13.2.10, Part 1, Part C** and **3.11, Part CS of the Rules for the Survey and Construction of Steel Ships.**	**5.1.1 Scope** This chapter applies to the testing and inspection for the approval of manufacturing process of non-metallic bearing material for rudders specified in the requirements of **13.2.10, Part 1, Part C** and **3.11, Part CS of the Rules for the Survey and Construction of Steel Ships.**	Terminology alignment
5.2 Approval Application	**5.2 Approval Application**	
5.2.1 Approval Application Form Manufacturers wishing to obtain the type approval of non-metallic bearing material for rudders are to submit the appropriate application form (**Form 4-11**).	**5.2.1 Approval Application Form** Manufacturers wishing to obtain the approval of manufacturing process of non-metallic bearing material for rudders are to submit a single copy of the appropriate application form (**Form 4-11**).	Terminology alignment To delete the specification of the number of copies due to digitization
5.2.2 Data to be Submitted **1** Each of the drawings and documents given as follows to be submitted together with the appropriate application form specified in **5.2.1**. ((1) to (8) are omitted.)	**5.2.2 Data to be Submitted** **1** Three copies each of the drawings and documents given as follows to be submitted together with the appropriate application form specified in **5.2.1**. ((1) to (8) are omitted.)	To delete the specification of the number of copies due to digitization

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Amended	Original	Remarks
5.4 Approval Test	**5.4 Approval Test**	
5.4.4 Submission of Test Records After completion of the approval test, the manufacturer is to produce records of approval test, and is to submit them to the Society upon receiving confirmation by the Society's Surveyor.	**5.4.4 Submission of Test Records** After completion of the approval test, the manufacturer is to produce records of approval test, and is to submit the three copies to the Society upon receiving confirmation by the Society's Surveyor.	To delete the specification of the number of copies due to digitization
5.5 Approval	**5.5 Approval**	
5.5.1 Notification of Approval The Society, when it considers that the result of field Assessment and approval test are appropriate, is to approve the manufacturing process of bearing materials applied for, give notice specifying the approval number, date of approval, type, model, and other relevant particulars, to the manufacturer and inform the branch office.	**5.5.1 Notification of Approval** The Society, when it considers that the result of field Assessment and approval test are appropriate, is to approve the manufacturing process of bearing materials applied for, give notice to the manufacturer and inform the branch office.	Terminology alignment
5.5.2 Valid Term A valid term of the approval certificate is 5 *years* from the date of the initial or renewal approval. In case where the renewal assessment is carried out within 3 *months* before the expiry date, a valid term of the certificate is 5 *years* from the next date of the expiry date of the previous validity.	**5.5.2 Valid Term** A valid term of the approval certificate is 5 *years* from the date of the initial or renewal approval. In case where the renewal assessment is carried out within 3 *months* before the expiry date, a valid term of the certificate is 5 *years* from the expiry date.	Terminology alignment

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Amended	Original	Remarks
Chapter 6 TYPE APPROVAL OF AIRBORNE SOUND INSULATING MATERIALS USED FOR BULKHEADS AND DECKS	**Chapter 6 APPROVAL OF AIRBORNE SOUND INSULATION PROPERTIES OF MATERIALS USED FOR BULKHEADS AND DECKS**	Terminology alignment
6.1 General	**6.1 General**	
6.1.1 Scope The requirements of this chapter apply to the tests and inspections for the type approval of the airborne sound insulating materials used for bulkheads and decks in accordance with the requirements of **An5.2**, **Annex 2.3.1-2 "PROCEDURES FOR ON BOARD NOISE MEASUREMENTS", Part B of the Rules for the Survey and Construction of Steel Ships**.	**6.1.1 Scope** The requirements of this chapter apply to the tests and inspections for the approval of the airborne sound insulation properties of materials used for bulkheads and decks in accordance with the requirements of **An5.2**, **Annex 2.3.1-2 "PROCEDURES FOR ON BOARD NOISE MEASUREMENTS", Part B of the Rules for the Survey and Construction of Steel Ships**.	Terminology alignment
6.2 Application Procedures	**6.2 Application Procedures**	Terminology alignment
6.2.1 Procedures The appropriate application form (**Form 4-12**) accompanied by each of the documents specified in **6.2.3** is to be submitted to the Society (Head Office).	**6.2.1 Procedures** The appropriate application form (**Form 4-12**) accompanied by 3 copies each of the documents specified in **6.2.3** is to be submitted to the Society (Head Office).	
6.2.2 Applicant Material manufacturers are to be the applicant for approval except in cases where the applicant, not the manufacturer, is ultimately responsible for the quality of the products.	**6.2.2 Applicant** Material manufacturers are to be the applicant for type approval except in cases where the applicant, not the manufacturer, is ultimately responsible for the quality of the products.	

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
6.4 Approval Tests **6.4.1 General** **2** The test is to be carried out at a laboratory in accordance with *ISO* 10140-2:2010, and the test record are to be submitted to the Society.	**6.4 Approval Tests** **6.4.1 General** **2** The test is to be carried out at a laboratory in accordance with *ISO* 10140-2:2010, and two copies of the test record are to be submitted to the Society.	
6.5 Notice of Approval **6.5.1 Notice of Approval** When the Society is satisfied with the results of the examination of the documents submitted, the confirmatory survey specified in **6.3** and the approval test specified in **6.4**, a "Certificate for Approval" specifying the approval number, date of approval, type, model, and other relevant particulars, is issued by the Society.	**6.5 Notice of Approval** **6.5.1 Notice of Approval** When the Society is satisfied with the results of the examination of the documents submitted, the confirmatory survey specified in **6.3** and the approval test specified in **6.4**, a "Certificate for Approval of Airborne Sound Insulation Properties" is issued by the Society.	
6.7 Periodical Examinations **6.7.1 Application for Periodical Examinations** **1** Periodical examinations are to be carried out before or on the expiry date of the "Certificate for Approval".	**6.7 Periodical Examinations** **6.7.1 Application for Periodical Examinations** **1** Periodical examinations are to be carried out before or on the expiry date of the "Certificate for Approval of Airborne Sound Insulation Properties".	
6.7.3 Renewal of the Certificate of Approval When the results of the periodical examination are considered acceptable to the Society, the Society issues the	**6.7.3 Renewal of the Certificate of Approval** When the results of the periodical examination are considered acceptable to the Society, the Society issues the	

Amended	Original	Remarks
"Certificate for Approval" specified **6.5**.	"Certificate for Approval of Airborne Sound Insulation Properties" specified **6.5**.	
6.7.4 Notice of Renewal **1** The Society issues the "Certificate for Approval" which is valid for five *years* from the date of completion of the periodical examination when the Society ascertains continuous compliance with the approval conditions through a review of the test report of the periodical examination specified in **6.7.2**.	**6.7.4 Notice of Renewal** **1** The Society issues the "Certificate for Approval of Airborne Sound Insulation Properties" which is valid for five *years* from the date of completion of the periodical examination when the Society ascertains continuous compliance with the approval conditions through a review of the test report of the periodical examination specified in **6.7.2**.	
Chapter 7 TYPE APPROVAL OF INSULATION MATERIALS USED IN CARGO CONTAINMENT SYSTEMS FOR LIQUEFIED GASES	**（Newly added）**	Addition of type approval for "INSULATION MATERIALS USED IN CARGO CONTAINMENT SYSTEMS FOR LIQUEFIED GASES" to Chapter 7, Part 5 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use. (Transfer from Annex 1 of Part N and GF.)
7.1 General	**(Newly added)**	
7.1.1 Scope **1** This chapter applies to the tests and inspections for the type approval of insulation materials used in the cargo	**(Newly added）** (Newly added)	

Amended	Original	Remarks
containment systems specified in **N4.19.3-3(1), Part N of the Guidance for the Survey and Construction of Steel Ships.** Upon applicant request, this chapter is to apply correspondingly when obtaining type approval for insulation materials used in cargo piping systems.		
2 This chapter applies to the tests and inspections for the type approval of insulation materials used in the fuel containment systems specified in **1.1.3-1, Part GF of the Rules for the Survey and Construction of Steel Ships** and **GF6.4.13-1(1), Part GF of the Guidance for the Survey and Construction of Steel Ships**. Upon applicant request, this chapter is to apply correspondingly when obtaining type approval for insulation materials used in fuel piping systems.	(Newly added)	
7.2 Application Procedures	**(Newly added)**	
7.2.1 Procedures Application for type approval is to be made to the Society (Head Office) using the designated application form (**Form 4-10**) together with each of the documents specified in **7.2.4**.	**(Newly added)** (Newly added)	
7.2.2 Notice of Alterations If major alterations made to the manufacturing process, material composition or other approved items, a notice explaining such alterations with respect to approved items is to be submitted to the Society.	**(Newly adde)** (Newly added)	
7.2.3 Applicants Material manufacturers are, in principle, to be the	**(Newly added)** (Newly added)	

Amended	Original	Remarks
applicants for approval except where applicants other than manufacturers are responsible for final product quality.		
7.2.4 Documents Documents containing the following information are to be submitted to the Society with the application. (1) Manufacture history and organisation (2) General description of major manufacturing facilities (3) Product specifications (4) Packaging and marks (labels, etc.) (5) Manufacturing process (6) Product physical properties assured by manufacturer (7) Statistical data showing manufacturing variations in the measured values of principal mechanical properties (such as compressive strength, shear strength, etc.), if any (8) Product storage method (9) Manufacturing records (10) Other Society certificate (if any) (11) Test results of properties specified in **4.19.3-2, Part N of the Rules for the Survey and Construction of Steel Ships** and **N4.19.3-4, Part N of the Guidance for the Survey and Construction of Steel Ships** according to tank type, when insulation materials are used in cargo containment systems. (12) Test results of properties specified in **6.4.13-3(2), Part GF of the Rules for the Survey and Construction of Steel Ships** and **GF6.4.13-6, Part GF of the Guidance for the Survey and Construction of Steel Ships** according to tank type, when insulation materials are used in fuel	**(Newly added)** (Newly added)	

Amended	Original	Remarks
containment systems.		
7.2.5 Omission of Documents	**(Newly added)**	
(1) Manufacturers who have the products already approved according to this chapter may omit the submission of documents which are duplicates of those previously submitted for another type approval if they so indicate.	(Newly added)	
(2) Manufacturing process, manufacturing standards, material composition and other items considered confidential to manufacturers may be omitted from being submitted if they are so declared. However, the Society reserves the right to survey such items at confirmation surveys of manufacturing and quality control procedures if considered necessary.		
7.2.6 Insulation Application Procedures	**(Newly added)**	
1 Approval applications for insulation materials, in addition to the general procedures, are to include in information on all precautions at time of application and associated test items.	(Newly added)	
2 Applications for insulation materials including detailed application procedures for each ship are to be submitted to the Society for approval.	(Newly added)	
7.3 Confirmation of Manufacturing and Quality Control Procedures	**(Newly added)**	
7.3.1 Survey	**(Newly added)**	
Confirmation surveys for manufacturing and quality	(Newly added)	

Amended	Original	Remarks
control procedures are to be carried out to verify the manufacturer's ability to produce materials of a stable product quality (facilities, technologies, quality control and quality assurance systems, and manufacturer inspection systems).		
7.3.2 Omission of Confirmation Survey Confirmation surveys may be omitted when the Society deems such surveys unnecessary as a result of the examination of documents submitted.	**(Newly added)** (Newly added)	
7.3.3 Survey Items The following items are to be examined. (1) Manufacturer inspection system, organisation and claim disposal department (2) Manufacturing and inspection facilities (3) Quality control and quality assurance systems (3) Quality control and quality assurance system	**(Newly added)** (Newly added)	
7.4 Approval Test	**(Newly added)**	
7.4.1 Approval Test **1** By using test specimens taken with due regard paid to the actual application procedures, tests to verify the test items given in **Table 5.7-1** are to be conducted according to test procedures as specified in the same table or suitable other procedures as approved by the Society, and it is to be verified that the specifications and physical properties established by the manufacturer are complied with.	**(Newly added)** (Newly added)	
2 Test items and procedures for approval tests for insulation materials used in cargo containment systems are to	(Newly added)	

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Amended	Original	Remarks
be as specified in **4.19.3, Part N of the Rules for the Survey and Construction of Steel Ships** and **N4.19.3, Part N of the Guidance for the Survey and Construction of Steel Ships** according to tank type.		
3 Test items and procedures for approval tests for insulation materials used in fuel containment systems are to be as specified in **6.4.13-3, Part GF of the Rules for the Survey and Construction of Steel Ships** and **N6.4.13-5, Part Gf of the Guidance for the Survey and Construction of Steel Ships** according to tank type.	(Newly added)	
4 In cases where it is deemed necessary by the Society, test items are to be carried out in the presence of a Society surveyor. Prior to the implementation of a test, a test plan is to be submitted to the Society (Head Office). Said test plan is to specify the test location and the acceptance criteria for the characteristics of the test.	(Newly added)	

Amended	Original	Remarks

Table 5.7-1. Test I Items for Insulation Materials

No.	Test item	Procedure of test
1	Compatibility with the cargo / Fuel	Tensile, compression, shearing, bending test after dipping in the cargo (*DIN 53428*)
2	Solubility in the cargo / Fuel	Changes in the size and weight of test specimen before and after dipping in the cargo (*DIN 53428*)
3	Absorption of the cargo / Fuel	Comparison of weight of test specimen or test of water absorbing properties before and after dipping in the cargo (*DIN 53428*)
4	Shrinkage	*ISO 2796, ASTM D 2126*
5	Aging	*ASTM D*756
6	Closed cell content	*ISO* 4590, *ASTM D*2856, *ASTM D*6226
7	Density	*ISO* 845, *ISO* 2781, *ASTM D*1622
8	Mechanical properties ・Bending strength ・Compression strength ・Tensile strength ・Shearing strength	 *ISO 1209, ASTM C 203, ASTM D790* *ASTM D 695, ASTM D 1621* *ISO* 1926, *EN* 1607, *ASTM D*412, *ASTM D*638, *ASTM D*1623 *ISO 1922, ASTM C 273*
9	Thermal expansion	*ASTM D*696, *ASTM E*228, *ASTM E*831
10	Abrasion	—
11	Cohesion	*ASTM D 1623*
12	Thermal conductivity	*ISO 8302, JIS A 1412, ASTM C 177, ASTM C 518*
13	Resistance to vibration	*ISO 10055*
14	Resistance to fire and flame spread	*JIS A 9511, DIN 4102*
15	Resistance to fatigue failure and crack propagation	—

Note:
Of the test items given above, necessary items are to be selected and tested according to the type of insulation system. However, at least test items 4, 6 (for independent foam material only), 7, 8, 12 and 14 are to be dealt with for all types of insulation systems. In cases where insulation materials are used in cargo containment systems, see **N4.19.3-4 to 7, Part N of the Guidance for the Survey and Construction of Steel Ships**. In cases where insulation materials are used in the fuel containment systems, See **GF6.4.13-1 to 4, Part GF of the Guidance for the Survey and Construction of Steel Ships.**

Amended	Original	Remarks
7.4.2 Test Records After completion of tests, manufacturers are to create a test report and submit said report to the Society upon receiving confirmation from a Society surveyor.	**(Newly added)** (Newly added)	
7.5 Approval	**(Newly added)**	
7.5.1 Certificate When the results of the tests specified in **7.4.1** are confirmed to be appropriate, the Society approves the equipment (hereinafter referred to as "approved equipment") and issues the relevant approval certificate specifying the approval number, date of approval, type, model, and other relevant particulars.	**(Newly added)** (Newly added)	
7.5.2 Validity of Approval The certificate specified in **7.5.1** is to be valid until a date not exceeding 5 *years* from its date of issue. However, when the approval is renewed in accordance with **7.5.3**, the new certificate is to be valid until a date not exceeding 5 *years* from the date of expiry of the existing certificate.	**(Newly added)** (Newly added)	
7.5.3 Renewal of Approval **1** In the case of application for renewal of approval, manufacturers are to submit to the Society the designated application form (**Form 4-10**) accompanied with the certificate previously issued. Any changes in the specification of the approved equipment are to be described in the application.	**(Newly added)** (Newly added)	

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Amended	Original	Remarks
2 When the specifications of the approved equipment remain unchanged, the Society approves the renewal of approval and issues a new certificate. Manufacturers who received a new certificate are to return the existing certificate to the Society as soon as possible.	(Newly added)	
7.6 Markings	**(Newly added)**	
Markings and packaging are to be as shown in the documents attached to the application for the approval and no changes are to be made without agreement by the Society. Approval numbers are to be marked such a way to clearly indicated the product is approved by the Society.	(Newly added)	
7.7 Quality Control and Quality Assurance	**(Newly added)**	
7.7.1 General	**(Newly added)**	
Manufactures are responsible for ensuring the manufacturing process and product quality are in accordance with the same procedures and systems used when surveyed and examined by the Society.	(Newly added)	
7.7.2 Results of Production Tests	**(Newly added)**	
The results of production tests are to be available for review whenever requested by the Society.	(Newly added)	
7.7.3 Changes in Approved Items	**(Newly added)**	
Changes in the manufacturing process, material composition and other approved items (including changes of	(Newly added)	

Amended	Original	Remarks
the contents in approved documents) are to be reported to the Society for review. The Society will subsequently inform manufacturers of the results of such reviews.		
7.8 Periodical Examinations	**(Newly added)**	
7.8.1 Application for Periodical Examination	**(Newly added)**	
1 Manufacturers of approved materials are to be subjected to periodical examinations at an interval of 5 *years*.	(Newly added)	
2 Application for periodical examinations is to be made to the Society using the designated application form (**Form 4-10**) together with documents describing the Society's approval number, date of issue of the certificate and items altered from the original approved conditions, if any.	(Newly added)	
7.8.2 Tests of Periodical Examination	**(Newly added)**	
At each periodical examination, the survey items specified in **7.3** and the tests considered necessary by the Society among the test items specified in **7.4** are to be carried out.	(Newly added)	
7.8.3 Renewal of Certificates of Approval	**(Newly added)**	
When the results of the periodical examination are considered are considered acceptable to the Society, the Society reissues the Certificate of Approval for Materials for Refrigerated Chambers specified **7.5**.	(Newly added)	

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Amended	Original	Remarks
7.9 Revocation of Approval **7.9.1 Revocation of Approval** Approval may be revoked if any of the following cases is found relevant. (1) When doubt occurs on the performance of the approved material as the result of an examination of its service record. (2) When the manufacturer is not subjected to the periodical examination. (3) When the material failed to pass the periodical examination. (4) When the manufacturer offers to stop manufacturing the material. (5) When the manufacturer requests the withdrawal of approval.	**(Newly added)** **(Newly added)** (Newly added)	

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Amended	Original	Remarks
Part 6 MACHINERY	**Part 6 MACHINERY**	
Chapter 1 TYPE APPROVAL OF PMS/CBM MANAGEMENT SOFTWARE	**（Newly added）**	Addition of type approval for " PMS/CBM MANAGEMENT SOFTWARE" to Chapter 1, Part 6 (Transfer from Annex of Part B.)
1.1 General	**(Newly added)**	
1.1.1 Scope	**(Newly added)**	
1 These procedures apply to the tests, examinations, etc. of the computer software required by ships adopting the Planned Machinery Maintenance Scheme (hereinafter referred to as "PMS") or the Condition Based Maintenance Scheme (hereinafter referred to as "CBM") in accordance with the requirements given in **9.1.3-3, Part B of the Rules** or **B9.1.4-2, Part B of the Guidance**.	(Newly added)	
2 The approval of system software developed to manage all internal ship operations is to follow these procedures.	(Newly added)	
3 The software used on ships which is not subject to CBM need not comply with **1.3.3**.	(Newly added)	
1.2 Application for Approval	**(Newly added)**	
1.2.1 Application Form	**(Newly added)**	
Applicants for software approval are to submit an application form (**Form-PMSsoftware**) to the Society.	(Newly added)	

Amended	Original	Remarks
1.2.2 Documents to be Submitted The documents listed below are to be submitted together with the application form specified in 1.2.1: (1) Software: (demonstrational software may be submitted. In cases where a dedicated installer is necessary to install such software, the installer is to be submitted together with the software) (2) Operation manual which indicates the following contents in detail: (a) System requirements (central processing unit, operating system, required capacity of the hard disc and memory, etc.) (b) Procedure to install and uninstall the software (c) Function of the software (d) Operating method (3) Information on the manufacturing and quality control standards of said software (4) Manufacturing and delivery records of said software (if any) (5) Other documents deemed necessary by the Society	**(Newly added)** (Newly added)	
1.3 Function	**(Newly added)**	
1.3.1 Planned Maintenance Function Software is to have the following planned maintenance functions: (1) It is to be capable of registering the maintenance plans for those survey items required by the machinery maintenance scheme (PMS).	**(Newly added)** (Newly added)	

Amended	Original	Remarks
(2) It is to be capable of specifying the time schedule of maintenance or running hours for each item of machinery and equipment including their parts. (3) It is to be capable of displaying a list of at least the following items. The list is to classify the registered machinery, equipment and their parts and to be displayed in a tree structure format, etc. (a) Names of machinery, equipment and their parts (b) Maintenance items (c) Maintenance interval (next inspection date or running hour) (d) Maintenance schedule (It is to be able to directly input the inspection date or calculate from the maintenance interval) (e) Person in charge of maintenance (4) Maintenance intervals are not, in principle, to exceed five years. Maintenance intervals are to be capable of being displayed on the list of maintenance within a term which is arbitrarily designated. (5) In cases where there are maintenance items which expire after the maintenance period, such items are to be easily identified.		
1.3.2 Maintenance Records Function The software is to have the following maintenance record functions: (1) It is to be capable of managing and recording the results of the maintenance conducted by the planned maintenance specified in **1.3.1**. The items regarding management and record are to be included the following:	**(Newly added)** (Newly added)	

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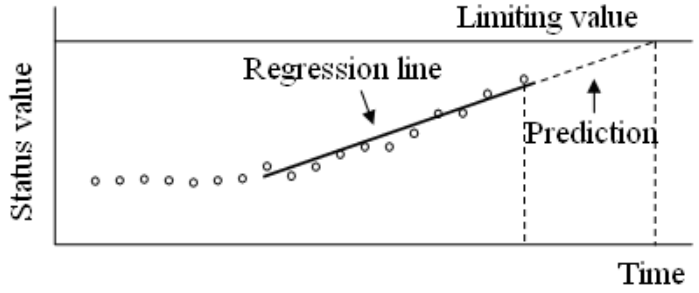
Amended	Original	Remarks
(a) Names of machinery, equipment and their parts (b) Maintenance items and results (including an exchange of parts) (c) Maintenance completion date (d) Total running hour (e) Next inspection date (f) Measurement data (including original design dimensions and allowable tolerance) However, such data is only required in cases where measurements are taken. (g) The condition of damage and the repair method in cases where damage was found. (2) List of the maintenance items within the designated term is to be displayed. Such lists are to include the name of machinery, equipment and their parts together with the maintenance items and the maintenance completion date. (3) Past maintenance records are to be displayed in cases where machinery, equipment and their parts are arbitrarily selected.		
1.3.3 Condition Monitoring Function **1** The software is to have a function for the condition monitoring of machinery, equipment and their parts as necessary. Such condition monitoring is to be capable of analysis such as trend analysis if necessary. In cases where trend analysis is adopted, the following requirements are to be satisfied: (1) In cases where measurement data is affected by temperature, running speed, load, etc., the data is to be standardized and trend analysis is to be conducted	**(Newly added)** (Newly added)	

Amended	Original	Remarks
against the index except in those cases where trend analysis is conducted against measurement data obtained during steady operating conditions. (2) The limiting parameters of measurement data are to be determined in accordance with the recommended values of the manufacturer or through statistical processing based on baseline data. In cases where such values are determined by the manufacturer through statistical processing, limiting parameters are to be automatically calculated based on accumulated data. However, these values may be determined by other methods deemed appropriate by the Society. (3) Trends of measurement data together with relevant limiting values are to be able to be displayed by a simple operation. (See **Fig. 1.3.3**)		
Fig. 1.3.3 Trend Display  	(Newly added)	
2 Software may use diagnostic technology such as complex algorithms, machine learning and statistical	(Newly added)	

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
knowledge obtained from data from machinery, etc. installed on other ships in order to identify the acceptability of continued service for machinery, equipment and components, or whether maintenance is required. The software need not follow machinery manufacturer recommended maintenance instructions or use manufacturer specified limiting parameters; in such cases, however, the software is to be approved in accordance with machinery manufacturer recommendations, industry standards and its usage history on other ships registered by the Society. **3** Maintenance management based on the condition monitoring specified in **-1** above is to satisfy the following: (1) Planned maintenance (a) Machinery, equipment and their parts are to be capable of being registered apart from those which are periodically during open up examination. (b) The registration of the machinery, equipment and their parts which apply to condition monitoring are to include the following items: i) Names of machinery, equipment and their parts ii) Kind of measured signal iii) Measurement interval iv) Limiting value (This value is to be set up for each kind of measured signal) (2) Measuring process and recording (a) Measurement date and measurement value are to be recorded. (b) In cases where open up examinations are conducted, it is to be capable of recording the	(Newly added)	

Amended	Original	Remarks
same results of the maintenance specified in **1.3.2**.		
1.4 Administration of Software	**(Newly added)**	
1.4.1 Administration of Revision System manufacturers and administers are to handle any software revisions caused by changes in the system. Specific information related to software revisions are to be verified on main displays or menus.	**(Newly added)** (Newly added)	
1.4.2 Administration of Backup System manufacturers and administers are to specify proper procedures for backing up administrated maintenance data.	**(Newly added)** (Newly added)	
1.5 Verification Test In principle, the Society will conduct verification tests of those functions specified in **1.3** after examining the documents specified in **1.2**. Verification tests may be conducted under the conditions that the systems are actually used at either the ship management company or onboard the ship. However, in cases where the relevant functions can be verified by the software which has been submitted, verification tests may be omitted.	**(Newly added)** (Newly added)	

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
1.6 Approval	**(Newly added)**	
1.6.1 Notification of Approval In cases where the documents specified in **1.2** and verification test records specified in **1.5** are considered appropriate, the Society will approve the issue of a new certificate. In cases where the software has a function specified in **1.3.3** or other optional functions, these functions are stated on the certificate.	**(Newly added)** (Newly added)	
1.6.2 Term of Validity The term of validity of the "Certificate of Approval" will be 5 *years* from the date of approval. In cases where renewal of approval is carried out in accordance with **1.6.3**, the term of validity will be 5 *years* from the next day after the expiration date of the previous period of validity.	**(Newly added)** (Newly added)	
1.6.3 Renewal of Validity In the case of renewing validity, manufacturers are to submit the Society an application Form along with the previously issued certificate. Changes of specification, if any, are to be described on the application form.	**(Newly added)** (Newly added)	
1.6.4 Changes in the Contents of Approval **1** In the case of specification changes of approved software, applicants are to submit a "Certificate of Approval" (original) and those documents specified in **1.2.2** according to the content of changes together with an application form.	**(Newly added)** (Newly added)	
2 The Society requires the verification test specified in **1.5** as necessary.	(Newly added)	
3 In cases where the documents specified in **-1** and	(Newly added)	

Amended	Original	Remarks
verification test records specified in **-2** are considered appropriate, the Society will issue a new certificate. **4** In cases where approval is given for a design with a partial modification, the expiration date will not be renewed in principle.	(Newly added)	
1.6.5 Revocation of Approval In cases where any of the following is relevant, the Society may revoke its approval and give notice of such revocation to manufacturers. (1) In cases where the approval renewal procedures given in **1.6.3** were not followed. (2) In cases where requests for revocation are made by applicants or manufacturers. (3) In cases where the approved condition was changed without the permission of the Society. (4) In cases where applicants or manufacturers do not pay approval fees.	**(Newly added)** (Newly added)	
(Delete)	**Chapter 1 APPROVAL OF STANDARDIZED DESIGN FOR MACHINERY AND EQUIPMENT**	Delete (Transfer from Annex of Part B)
(Delete)	**1.1 General**	
(Delete) (Delete)	**1.1.1 Scope** The requirements of this chapter deal with the approval of the drawings and documents which are submitted in advance to the Society as the standardized design	

Amended	Original	Remarks
	designating the construction, dimensions, materials, specifications, etc. on machinery and equipment required to obtain approval by submitting drawings to the Society in accordance with the requirements of **2.1.3, Part B of the Rules for the Survey and Construction of Steel Ships, 2.1.2, Part 2 of the Rules for High Speed Craft, 2.1.2, Part 2 of the Rules for the Survey and Construction of Inland Waterway Ships, 2.3.1-2 of the Rules for Cargo Handling Appliances** and **2.1.1 of the Rules for Cargo Refrigerating Installations**.	
(Delete)	**1.2 Application**	
(Delete) (Delete)	**1.2.1 Application Form** The manufacturer, who intends to obtain the approval of standardized design, is to submit the appropriate application form (**Form 6-1**) filled in with necessary data and information to the Society (Head Office).	
(Delete) (Delete)	**1.2.2 Drawings and Documents** In accordance with the requirements of the rules applicable to the machinery and equipment, drawings and documents, in triplicate, are to be submitted together with the application form specified in **1.2.1**.	

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
(Delete)	**1.3 Approval**	
(Delete)	**1.3.1 Notification of Approval**	
(Delete)	The Society, when satisfied upon examination that the drawings and documents fulfill the requirement concerned, will agree on handling these drawings and documents as the standardized design. Then one copy each of the drawings and documents will be returned to the applicant with approval stamp of the Society, approval date, approval number and term of validity indicated on them.	
(Delete)	**1.3.2 Term of Validity**	
(Delete)	The term of validity of the approval of standardized design will be five *years* from the date of approval.	
(Delete)	**1.3.3 Renewal of Approval**	
(Delete)	**1** The manufacturer, who intends to have a continuation of the approval of standardized design already expired or to make partial modification on the design, is to submit an application in accordance with the requirements of **1.2** newly.	
(Delete)	**2** In case where approval is given for a design with partial modification, expiration date will not be renewed in principle.	
(Delete)	**1.3.4 Revocation of Approval**	
(Delete)	In case where either of the following **(1)** or **(2)** applies, the Society will revoke the approval of standardized design, and give a notice to the manufacturer. (1) In association with the implementation or revision of international conventions, laws and regulations, the machinery and equipment for which the standardized	

Amended	Original	Remarks
	design were approved do not deserve the approval any longer. (2) Serious shortcomings are found in the machinery and equipment manufactured according to the approved standardized design after being installed in ships.	
(Delete)	**1.4 Handling after Approval**	
(Delete)	**1.4.1 Allocation of Machinery and Equipment to Ships**	
(Delete)	In case where the machinery and equipment for which the standardized design have been approved are allocated to NK-classed ships, the appropriate application form is to be submitted to the Society (Head Office), in triplicate, in place of the drawings and documents required by the rules.	
Chapter 2 TYPE APPROVAL OF MACHINERY AND EQUIPMENT	**Chapter 2 TYPE APPROVAL OF USE OF MACHINERY AND EQUIPMENT**	Terminology alignment
2.2 Application	**2.2 Application**	
2.2.2 Documents **1** The drawings and data required by the relevant provisions of the Rules applicable to the machinery and equipment and the data listed **(1)** through **(7)** below, are to be submitted together with the application form specified in	**2.2.2 Documents** **1** The drawings and data required by the relevant provisions of the Rules applicable to the machinery and equipment and the data listed **(1)** through **(7)** below, each in triplicate, are to be submitted together with the application	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
2.2.1. ((1) to (7) are omitted.)	form specified in **2.2.1**. ((1) to (7) are omitted.)	
2.4 Approval Tests	**2.4 Approval Tests**	
2.4.4 Test Records **1** The manufacturer is to prepare records of the approval test after completion of the test, to obtain verification by the Society's attending surveyor and to submit them, to the Society.	**2.4.4 Test Records** **1** The manufacturer is to prepare records of the approval test after completion of the test, to obtain verification by the Society's attending surveyor and to submit them, in triplicate, to the Society.	To delete the specification of the number of copies due to digitization
2.5 Approval	**2.5 Approval**	
2.5.2 Term of Validity The term of validity of the type approval of machinery and equipment will be five *years* from the date of approval. In case when the renewal of approval is carried out in accordance with the requirements in **2.5.3**, valid term will be 5 *years* from the next day after the expiry date of the previous validity.	**2.5.2 Term of Validity** The term of validity of the type approval of machinery and equipment will be five *years* from the date of approval.	Terminology alignment

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
Chapter 3 APPROVAL OF COEFFICIENT FOR DISCHARGE OF SAFETY VALVES, ETC.	**Chapter 3 APPROVAL OF COEFFICIENT FOR DISCHARGE OF SAFETY VALVES, ETC.**	
3.2 Application	**3.2 Application**	
3.2.2 Documents The sectional assembly drawing of the safety valves, etc. and the plan for the tests, are to be submitted to the Society together with the application form specified in **3.2.1** above.	**3.2.2 Documents** The sectional assembly drawing of the safety valves, etc. and the plan for the tests, each in triplicate, are to be submitted to the Society together with the application form specified in **3.2.1** above.	To delete the specification of the number of copies due to digitization
3.3 Approval Tests	**3.3 Approval Tests**	
3.3.2 Test Records The manufacturer is to submit the test records, after completion of the test to the Society (Head Office).	**3.3.2 Test Records** The manufacturer is to submit the test records, in triplicate, after completion of the test to the Society (Head Office).	To delete the specification of the number of copies due to digitization
3.4 Approval	**3.4 Approval**	
3.4.1 Announcement of Approval The Society, when satisfied upon examination of the drawings and test records submitted in accordance with **3.2.2** and **3.3.2**, will issue a certificate of approval specifying the approved *K* value, put approval stamps on the drawings and test records and return them back to the applicant.	**3.4.1 Announcement of Approval** The Society, when satisfied upon examination of the drawings and test records submitted in accordance with **3.2.2** and **3.3.2**, will issue a certificate of approval specifying the approved *K* value, put approval stamps on the drawings and test records and return one set of them back to the applicant.	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
3.4.2 Term of Validity The term of validity of the approval will be five *years* from the date of the approval. In case when the renewal of approval is carried out in accordance with the requirements in **3.4.3**, valid term will be 5 *years* from the next day after the expiry date of the previous validity.	**3.4.2 Term of Validity** The term of validity of the approval will be five *years* from the date of the approval.	Terminology alignment
Chapter 4 TYPE APPROVAL OF WELDED TYPE PIPE JOINTS	**Chapter 4 APPROVAL OF USE OF WELDED TYPE PIPE JOINTS**	
4.1 General	**4.1 General**	
4.1.1 Scope In accordance with the requirements in **D12.6.1-1(1)(e)ii), Part D of the Guidance for the Survey and Construction of Steel Ships**, the requirements of this chapter apply to tests and inspections for the type approval of pipe joints of a butt welded type and pipe joints of a slip-on sleeve welded type (such as elbows, reducers, tees, bends and sockets, etc.). In cases where this approval is obtained, surveyor attendance at shop tests may be omitted in accordance with the requirements of **D12.6.1-1(1)(e)ii), Part D of the Guidance for the Survey and Construction of Steel Ships** (hereinafter referred to as "the Rules").	**4.1.1 Scope** In accordance with the requirements in **D12.6.1(1)(e)ii), Part D of the Guidance for the Survey and Construction of Steel Ships**, the requirements of this chapter apply to tests and inspections for the approval of the omission of surveyor attendance at tests for pipe joints of a butt welded type and pipe joints of a slip-on sleeve welded type (such as elbows, reducers, tees, bends and sockets, etc.) regardless of the requirements of **12.6.1-1, Part D of the Rules for the Survey and Construction of Steel Ships** (hereinafter referred to as "the Rules").	Change in description

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
4.2 Application Procedures	**4.2 Application Procedures**	
Manufacturers who intend to obtain type approval for welded type pipe joints are to submit an application to the Society (branch office concerned) accompanied by the following data. ((1) and (2) are omitted.)	Manufacturers who intend to obtain approval of use for welded type pipe joints are to submit an application to the Society (branch office concerned) accompanied by three sets of the following data. ((1) and (2) are omitted.)	To delete the specification of the number of copies due to digitization
4.3 Approval Tests	**4.3 Approval Tests**	
4.3.2 Approval Tests	**4.3.2 Manufacturing Process Approval Tests**	Terminology alignment
4.4 Test Records	**4.4 Test Records**	
In cases where the approval tests specified in preceding **4.3** are carried out, the manufacturer is to prepare records of the approval test upon completion of the test, obtain verification by the Society's attending surveyor and submit them, to the Society (branch office concerned).	In cases where the approval tests specified in preceding **4.3** are carried out, the manufacturer is to prepare records of the approval test upon completion of the test, obtain verification by the Society's attending surveyor and submit them, in triplicate, to the Society (branch office concerned).	To delete the specification of the number of copies due to digitization
4.5 Notification of Approval and Terms of Validity	**4.5 Notification of Approval and Terms of Validity**	
4.5.1 Notification of Approval and Terms of Validity **1** The Society (branch office concerned) is to consider the results of confirmation and approval tests for pipe joints of a butt welded type and pipe joints of a slip-on sleeve welded type, and if deemed appropriate, issue the corresponding	**4.5.1 Notification of Approval and Terms of Validity** **1** The Society (branch office concerned) is to grant manufacturers permission to carry out tests for pipe joints of a butt welded type and pipe joints of a slip-on sleeve welded type without a Society surveyor being present in cases where	Change in description

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
certificate of approval specifying the approval number, date of approval, type, model, and other relevant particulars, to the manufacturer.	it considers the results of confirmation and approval tests appropriate, and to send the manufacturer the corresponding certificate of approval.	
2 The valid term of approval in the preceding **-1** is 5 *years* from the date of the approval. In case when the renewal of approval is carried out in accordance with the requirements in **-3** and **4**, valid term will be 5 *years* from the next day after the expiry date of the previous validity.	**2** The valid term of approval in the preceding **-1** is 5 *years*.	Change in description
4.6 Revocation of Approval	**4.6 Revocation of Approval**	
4.6.1 Revocation of Approval Where either of the following **(1)** to **(3)** is relevant, the Society may revoke the approval and notify the manufacturer accordingly (1) In cases where the valid term of approval expires and no application for the renewal of the approval is submitted. (2) In cases where doubts arise regarding the service records of products. (3) When a requests for revocation is made by the manufacturer.	**4.6.1 Revocation of Approval** Where either of the following **(1)** or **(2)** is relevant, the Society may revoke the approval and notify the manufacturer accordingly (1) In cases where the valid term of approval expires and no application for the renewal of the approval is submitted. (2) In cases where doubts arise regarding the service records of products manufactured by the approved manufacturing process. (Newly added)	Change in description

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
Chapter 5 APPROVAL OF MANUFACTURING <u>PROCESS OF</u> BOILERS AND GROUP 1 PRESSURE VESSELS	**Chapter 5 APPROVAL OF MANUFACTURING BOILERS AND GROUP 1 PRESSURE VESSELS**	
5.1 General	**5.1 General**	
5.1.1 Scope The requirements of this chapter apply to the tests and inspection concerning to the approval <u>of</u> manufacturing <u>process of</u> boilers or Group 1 pressure vessels for the first time to be installed in ships classed with the Society, in accordance with the requirements of **11.2.1-3, Part D of the Rules for the Survey and Construction of Steel Ships**.	**5.1.1 Scope** The requirements of this chapter apply to the tests and inspection concerning to the approval manufacturing boilers or Group 1 pressure vessels for the first time to be installed in ships classed with the Society, in accordance with the requirements of **11.2.1-3, Part D of the Rules for the Survey and Construction of Steel Ships**.	Terminology alignment
5.2 Approval	**5.2 Approval**	
5.2.1 Approval The manufacturer intending to obtain the approval of the manufacturing <u>process of</u> boilers or Group 1 pressure vessels is to submit the appropriate application form (**Form 6-11**) together with following documents to the Society: ((1) to (5) are omitted.)	**5.2.1 Approval** The manufacturer intending to obtain the approval of the manufacturing boilers or Group 1 pressure vessels is to submit the appropriate application form (**Form 6-11**) together with following documents to the Society: ((1) to (5) are omitted.)	Terminology alignment
5.2.2 Confirmation of Manufacturing and Quality Control Procedures For the approval of manufacturing <u>process of</u> boilers and Group 1 pressure vessels, the confirmation survey is to be carried out on the following items:	**5.2.2 Confirmation of Manufacturing and Quality Control Procedures** For the approval of manufacturing boilers and Group 1 pressure vessels, the confirmation survey is to be carried out on the following items:	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
((1) to (3) are omitted.)	((1) to (3) are omitted.)	
5.3 Certificate	**5.3 Certificate**	
Where the results of the survey are considered appropriate for manufacturing the products, the Society will issue a certificate of approval specifying the approval number, date of approval, type, model, and other relevant particulars, to the manufacturer.	Where the results of the survey are considered appropriate for manufacturing the products, the Society will issue a certificate for approval of manufacturing the products.	Change in description
5.4 Validity of Approval	**5.4 Validity of Approval**	
5.4.1 Validity of Approval **1** The valid term of approval in the preceding **5.3** will be five *years* from the date of the approval. In case when the renewal of approval is carried out in accordance with the requirements in **-2** and **-3**, valid term will be 5 *years* from the next day after the expiry date of the previous validity.	**5.4.1 Validity of Approval** **1** The valid term of approval in the preceding **5.3** will be five *years*.	Change in description
Chapter 6 TYPE APPROVAL OF PLASTIC PIPES	**Chapter 6 APPROVAL OF USE OF PLASTIC PIPES**	
6.4 Approval Tests	**6.4 Approval Tests for Process of Manufacture**	Terminology alignment
The approval tests are to be carried out in the presence of the Society's surveyor by the method under the testing	The approval tests for process of manufacture are to be carried out in the presence of the Society's surveyor by the	

Amended	Original	Remarks
standard specified in **6.9** or the method considered to be equivalent by the Society. However, when tests are carried out by the authorized organization or any organization considered appropriate by the Society, those on testing items other than strength test, electric conductivity test, heat dependence test of material, flame spread test and surface flammability test and fire endurance test as well as smoke generation and toxicity test may be carried out in the absence of the Society's surveyor.	method under the testing standard specified in **6.9** or the method considered to be equivalent by the Society. However, when tests are carried out by the authorized organization or any organization considered appropriate by the Society, those on testing items other than strength test, electric conductivity test, heat dependence test of material, flame spread test and surface flammability test and fire endurance test as well as smoke generation and toxicity test may be carried out in the absence of the Society's surveyor.	
6.5 Notification of Approval	**6.5 Notification of Approval**	
When the Society considers the product on which the approval is requested has sufficient property for piping system for ships by the results of examination of documents and factory inspection, the Certificate of Approval specifying the approval number, date of approval, type, model, and other relevant particulars, is issued by the Society. The Certificate is valid for five *years* from the date of the approval. In case when the renewal of approval is carried out in accordance with the requirements in **6.8.1**, valid term will be 5 *years* from the next day after the expiry date of the previous validity.	When the Society considers the product on which the approval is requested has sufficient property for piping system for ships by the results of examination of documents and factory inspection, the Certificate of Approval is issued by the Society. The Certificate is valid for five *years*.	Change in description
6.8 Continuance or Retraction of Approval	**6.8 Continuance or Retraction of Approval**	
6.8.1 Procedures for Continuance of Approval The applicant, when he intends to continue the approval of plastic pipes, is to submit the appropriate	**6.8.1 Procedures for Continuance of Approval** The applicant, when he intends to continue the approval of plastic pipes, is to submit the appropriate	To delete the specification of the number of copies

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
application form (**Form 6-5**) (in case where omission of periodical test is desired, the Application for Omission of Periodical Test describing the reasons) to the Society (Head Office). In either case, these documents are to be accompanied by the past records on the product and records of shop tests, (if manufacturing plants are located in two or more Survey Offices, additional copies for such extra offices are to be provided).	application form (**Form 6-5**) (in case where omission of periodical test is desired, the Application for Omission of Periodical Test describing the reasons) to the Society (Head Office). In either case, these documents are to be accompanied by the past records on the product and records of shop tests, each in duplicate (one each for the Head Office and Survey Office, however, if manufacturing plants are located in two or more Survey Offices, additional copies for such extra offices are to be provided).	due to digitization
6.9 Testing Procedures and Criteria	**6.9 Testing Procedures and Criteria**	
6.9.1 Criteria for Approval Test	**6.9.1 Criteria for Approval Test for Process of Manufacture**	Terminology alignment
Table 6.6 Requirements and Criteria of Approval Test of Plastic Pipes	Table 6.6 Requirements and Criteria of Approval Test for Process of Manufacture of Plastic Pipes	
(Table is omitted.)	(Table is omitted.)	

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
Chapter 7 TYPE APPROVAL OF VENTING SYSTEMS AND RELATED EQUIPMENT FOR OIL TANKERS	**Chapter 7 APPROVAL OF VENTING SYSTEMS AND RELATED EQUIPMENT FOR OIL TANKERS**	Terminology alignment
7.2 Application Procedure	**7.2 Application Procedure**	
7.2.1 Application Form for Approval Those desiring approval for venting systems and related equipment for oil tankers are requested to submit the appropriate application form (**Form 6-6**) filled in with necessary data and information to the Society.	**7.2.1 Application Form for Approval** Those desiring approval for venting systems and related equipment for oil tankers are requested to submit a single copy of the appropriate application form (**Form 6-6**) filled in with necessary data and information to the Society.	To delete the specification of the number of copies due to digitization
7.2.3 Data to be Submitted The data given in the following **(1)** through **(9)** are to be submitted together with the Application Form referred to in **7.2.1**. ((1) to (9) are omitted.)	**7.2.3 Data to be Submitted** Three copies of the data given in the following **(1)** through **(9)** are to be submitted together with the Application Form referred to in **7.2.1**. ((1) to (9) are omitted.)	To delete the specification of the number of copies due to digitization
7.4 Approval Test	**7.4 Approval Test**	
7.4.4 Record of Test **1** After completion of the approval test, the manufacturer is to produce a record of the approval test and is to submit it to the Society upon receiving confirmation by the surveyor of the Society.	**7.4.4 Record of Test** **1** After completion of the approval test, the manufacturer is to produce a record of the approval test and is to submit three copies to the Society upon receiving confirmation by the surveyor of the Society.	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
7.5 Approval	**7.5 Approval**	
7.5.1 Notification of Approval The Society grants approval for eliminating a part of the test specified in **7.4** against venting systems and related equipment for oil tankers as deemed appropriate in accordance with data submitted according to the requirement in **7.2** through **7.4** and on reports of the surveyor. In this case, the "Certificate of Approval" is published including the approval number, approval date, approval items, approval conditions etc. and, at the same time, among those drawings and documents submitted in accordance with the requirements in **7.2.3** and **7.4.4**, which the Society deems necessary, a seal of approval is stamped and returned to the applicant.	**7.5.1 Notification of Approval** The Society grants approval for eliminating a part of the test specified in **7.4** against venting systems and related equipment for oil tankers as deemed appropriate in accordance with data submitted according to the requirement in **7.2** through **7.4** and on reports of the surveyor. In this case, the "Notice of Approval" is published including the approval number, approval date, approval items, approval conditions etc. and, at the same time, among those drawings and documents submitted in accordance with the requirements in **7.2.3** and **7.4.4**, which the Society deems necessary, a seal of approval is stamped and returned to the applicant.	Terminology alignment
7.5.2 Period of Validity The valid term of approval in accordance with the requirements in this chapter will be 5 *years* from the date of the approval. In case when the renewal of approval is carried out in accordance with the requirements in **7.5.3**, valid term will be 5 *years* from the next day after the expiry date of the previous validity.	**7.5.2 Period of Validity** The period of validity of approval in accordance with the requirements in this chapter is not to exceed 5 *years* from the date of approval.	Change in description
7.5.3 Changes in the Contents of Approval **1** Manufacturers desiring continued application of the requirements in this chapter against equipment which have exceeded the period of validity or have undergone changes in the content of approval are to submit the appropriate application form (**Form 6-7**) and are to proceed with the application process by the following requirements in **7.2**.	**7.5.3 Changes in the Contents of Approval** **1** Manufacturers desiring continued application of the requirements in this chapter against equipment which have exceeded the period of validity or have undergone changes in the content of approval are to submit a copy of the appropriate application form (**Form 6-7**) and are to proceed with the application process by the following requirements in **7.2**.	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
7.7 Additional Requirements for Equipment Manufactured Outside Japan	**7.7 Additional Requirements for Equipment Manufactured Overseas**	
7.7.1 General As a rule, even though given equipment are manufactured outside Japan, they are still to be in accordance with the requirements in **7.2** through **7.6**. However, where this is acknowledged as being difficult by the Society, the equipment may be in accordance with the requirements in **7.7** of this section.	**7.7.1 General** As a rule, even though given equipment are manufactured overseas, they are still to be in accordance with the requirements in **7.2** through **7.6**. However, where this is acknowledged as being difficult by the Society, the equipment may be in accordance with the requirements in **7.7** of this section.	
7.7.2 Approval Application **2** Certificates of approval and performance records published by government organizations and ship classification societies outside Japan that are recognized by the Society are to be submitted for the equipment.	**7.7.2 Approval Application** **2** Certificates and performance records published by foreign government organizations and foreign ship classification societies recognized by the Society are to be submitted for the equipment.	Change in description
Chapter 8 TYPE APPROVAL OF RECIPROCATING INTERNAL COMBUSTION ENGINES	**Chapter 8 APPROVAL OF USE OF RECIPROCATING INTERNAL COMBUSTION ENGINES**	Terminology alignment
8.1 General	**8.1 General**	
8.1.1 General **1** The requirements in this chapter apply to the type approval for the following **(1)** and **(2)**. (1) Type approval of reciprocating internal combustion	**8.1.1 General** **1** The requirements in this chapter apply to the approval of use for the following **(1)** and **(2)**. (1) Approval of use of reciprocating internal combustion	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
engines required by **2.1.1-3** and **2.6.1-3, Part D of the Rules for the Survey and Construction of Steel Ships**, **2.1.1-2, Part 9 of the Rules for High Speed Craft** as well as **2.1.1-2** and **2.6.1-3, Part 7 of the Rules for the Survey and Construction of Inland Waterway Ships**; and (2) Type approval of gas-fuelled engines required by **4.1, Annex 1.1.3-3, Part GF** or **5.1, Annex 16.1.1-3, Part N of the Rules for the Survey and Construction of Steel Ships**. **7** In applying the procedures for type approval specified in this Chapter, reference is to be made to **Fig. 6.8-2**.	engines required by **2.1.1-3** and **2.6.1-3, Part D of the Rules for the Survey and Construction of Steel Ships**, **2.1.1-2, Part 9 of the Rules for High Speed Craft** as well as **2.1.1-2** and **2.6.1-3, Part 7 of the Rules for the Survey and Construction of Inland Waterway Ships**; and (2) Approval of use of gas-fuelled engines required by **4.1, Annex 1.1.3-3, Part GF** or **5.1, Annex 16.1.1-3, Part N of the Rules for the Survey and Construction of Steel Ships**. **7** In applying the procedures for approval of use specified in this Chapter, reference is to be made to **Fig. 6.8-2**.	Terminology alignment
8.2 Application and Approval of Submitted Documents	**8.2 Application and Approval of Submitted Documents**	
8.2.2 Drawings and Data **3** In addition to the drawings and data required by **-1**, where considered necessary, the Society may request further drawings and data to be submitted. This may include details or evidence of existing type approval or proposals for a testing programme carried out in accordance with this Chapter.	**8.2.2 Drawings and Data** **3** In addition to the drawings and data required by **-1**, where considered necessary, the Society may request further drawings and data to be submitted. This may include details or evidence of existing approval of use or proposals for a testing programme carried out in accordance with this Chapter.	Terminology alignment
4 In addition to those required by **-1** to **-3** above, those listed in the following **(1)** to **(6)** below, are to be submitted for the purpose of confirming whether the manufacturing facility (including production and assembly lines, machining units, special tools and devices, assembly and testing rigs as well as all lifting and transportation devices) is equipped in a	**4** In addition to those required by **-1** to **-3** above, those listed in the following **(1)** to **(6)** below, each in triplicate, are to be submitted for the purpose of confirming whether the manufacturing facility (including production and assembly lines, machining units, special tools and devices, assembly and testing rigs as well as all lifting and transportation	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
way which allows it to consistently produce engines and relevant engine components of a stable quality in accordance with required standards. ((1) to (7) are omitted.)	devices) is equipped in a way which allows it to consistently produce engines and relevant engine components of a stable quality in accordance with required standards. ((1) to (7) are omitted.)	
8.6 Handling after Approval	**8.6 Handling after Approval**	
8.6.2 Term of Validity The term of validity of the type approval will be five *years* from the date of approval. In case when the renewal of approval is carried out in accordance with the requirements in **8.6.4**, valid term will be 5 *years* from the next day after the expiry date of the previous validity.	**8.6.2 Term of Validity** The term of validity of the approval will be five *years* from the date of approval.	Change in description
8.6.4 Renewal of Approval **1** The manufacturer, who intends to have a continuation of the type approval already expired or to make partial technical modifications of the engine, is to submit an application in accordance with the requirements of **8.2.1** newly. In this case, in lieu of the data required by **8.2.2**, the drawings and data for reference specified in the following **(1)** or **(2)** are to be submitted. (1) The submission of modified documents or new documents with substantive modifications replacing former documents compared to the previous submission(s) for type approval; or (2) A declaration that no substantive modifications have been applied since the last type approval issued.	**8.6.4 Renewal of Approval** **1** The manufacturer, who intends to have a continuation of the approval already expired or to make partial technical modifications of the engine, is to submit an application in accordance with the requirements of **8.2.1** newly. In this case, in lieu of the data required by **8.2.2**, the drawings and data for reference specified in the following **(1)** or **(2)** are to be submitted. (1) The submission of modified documents or new documents with substantive modifications replacing former documents compared to the previous submission(s) for design approval; or (2) A declaration that no substantive modifications have been applied since the last design approval issued.	Terminology alignment

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
Fig. 6.8-2 Documents Flow for Type Approval of Reciprocating Internal Combustion Engines (Figure is omitted.)	Fig. 6.8-2 Documents Flow for Approval of Use of Reciprocating Internal Combustion Engines (Figure is omitted.)	Terminology alignment
Chapter 9 TYPE APPROVAL OF MECHANICAL JOINTS	**Chapter 9 APPROVAL OF USE OF MECHANICAL JOINTS**	Terminology alignment
9.1 General	**9.1 General**	
9.1.1 Scope The requirements of this chapter apply to testing and inspection for type approval of mechanical joints in accordance with the requirements of **12.3.3-2**, **Part D of Rules for the Survey and Construction of Steel Ships**.	**9.1.1 Scope** The requirements of this chapter apply to testing and inspection for approval of use of mechanical joints in accordance with the requirements of **12.3.3-2**, **Part D of Rules for the Survey and Construction of Steel Ships**.	Terminology alignment
9.2 Application	**9.2 Application**	
9.2.1 Application Form The manufacturer, who intends to obtain the type approval, is to submit the appropriate application form (**Form 6-9**) filled in with necessary data and information to the Society (Head Office).	**9.2.1 Application Form** The manufacturer, who intends to obtain the approval of use, is to submit the appropriate application form (**Form 6-9**) filled in with necessary data and information to the Society (Head Office).	To delete the specification of the number of copies due to digitization
9.2.2 Documents **1** The documents listed **(1)** through **(9)** below, are to be submitted together with the application form specified in	**9.2.2 Documents** **1** The documents listed **(1)** through **(9)** below, each in triplicate, are to be submitted together with the application	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
9.2.1. ((1) to (9) are omitted.) **2** Notwithstanding the requirements in **-1** above, submission of part or all of the reference may be omitted if the manufacturer had previous record of obtaining the type approval of the Society in the past, and the duplicated data are included therein.	form specified in **9.2.1**. ((1) to (9) are omitted.) **2** Notwithstanding the requirements in **-1** above, submission of part or all of the reference may be omitted if the manufacturer had previous record of obtaining the approval of the Society in the past, and the duplicated data are included therein.	Terminology alignment
9.3 Approval Tests	**9.3 Approval Tests**	
9.3.2 Details of Tests In the approval tests of mechanical joints, the following items **(1)** through **(9)** as deemed necessary by the Society are to be included according to **Table 6.9-1** : ((1) to (5) are omitted.) (6) Fire endurance test ((a) to (h) are omitted.) (i) Where thermal insulation is acceptable as a means of providing fire resistance, following requirements apply: (i) to iii) are omitted.) iv) A service restriction is to be stated on the Certificate of approval that the mechanical joints are to be fitted with thermal insulation during the installation in cases where the mechanical joints are used where fire resistance is required, unless mechanical joints are delivered already fitted with thermal insulation before installation. ((7) to (9) are omitted.)	**9.3.2 Details of Tests** In the approval tests of mechanical joints, the following items **(1)** through **(9)** as deemed necessary by the Society are to be included according to **Table 6.9-1** : ((1) to (5) are omitted.) (6) Fire endurance test ((a) to (h) are omitted.) (i) Where thermal insulation is acceptable as a means of providing fire resistance, following requirements apply: (i) to iii) are omitted.) iv) A service restriction is to be stated on the type approval certificate that the mechanical joints are to be fitted with thermal insulation during the installation in cases where the mechanical joints are used where fire resistance is required, unless mechanical joints are delivered already fitted with thermal insulation before installation. ((7) to (9) are omitted.)	Terminology alignment

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
9.4 Approval	**9.4 Approval**	
9.4.1 Test Records The manufacturer is to prepare records of the approval test after completion of the test, to obtain verification by the Society's attending surveyor and to submit them, to the Society.	**9.4.1 Test Records** The manufacturer is to prepare records of the approval test after completion of the test, to obtain verification by the Society's attending surveyor and to submit them, in triplicate, to the Society.	To delete the specification of the number of copies due to digitization
9.4.3 Renewal of Approval **1** The valid term of approval in the preceding **9.4.2** will be 5 *years* from the date of approval. In case when the renewal of approval is carried out in accordance with the requirements in **2** and **4**, valid term will be 5 *years* from the next day after the expiry date of the previous validity.	**9.4.3 Renewal of Approval** **1** The valid term of approval in the preceding **9.4.2** will be 5 *years*.	Change in description
2 In case where renewal of validity is intended, the manufacturer is to submit a copy of the existing certificate of approval in accordance with the requirements of **9.2** newly. In this case, the data required per **9.2** may be limited to the portion subjected to modification only.	**2** In case where renewal of validity is intended, the manufacturer is to submit a copy of the existing certificate in accordance with the requirements of **9.2** newly. In this case, the data required per **9.2** may be limited to the portion subjected to modification only.	Terminology alignment
9.4.4 Revocation of Approval In case where either of the following **(1)** through **(4)** applies, the Society will revoke the type approval of machinery and equipment, and give notice to the manufacturer. (1) In association with the implementation or revision of international conventions, laws, and regulations, the equipment for which the approval was granted do not deserve the approval any longer. (2) In case where the validity of approval is overdue and no application for the renewal of the approval is	**9.4.4 Revocation of Approval** In case where either of the following **(1)** through **(4)** applies, the Society will revoke the type approval of machinery and equipment, and give notice to the manufacturer. (1) In association with the implementation or revision of international conventions, laws, and regulations, the equipment for which the approval was granted do not deserve the approval any longer. (2) In case where the validity of approval is overdue and no application for the renewal of the approval is	Terminology alignment

Amended	Original	Remarks
submitted. (3) When serious shortcomings are found in structure or quality of the equipment already type approved after being installed ships. (4) When an applications for revocation is made by the manufacturer.	submitted. (3) When serious shortcomings are found in structure or quality of the equipment already approved after being installed ships. (4) When an applications for revocation is made by the manufacturer.	
Chapter 10 TYPE APPROVAL OF CRANKCASE EXPLOSION RELIEF VALVES FOR RECIPROCATING INTERNAL COMBUSTION ENGINES	**Chapter 10 APPROVAL OF USE OF CRANKCASE EXPLOSION RELIEF VALVES FOR RECIPROCATING INTERNAL COMBUSTION ENGINES**	Terminology alignment
10.1 General	**10.1 General**	
10.1.1 Scope **1** The requirements in this Chapter apply to testing and inspection for type approval of crankcase explosion relief valves for reciprocating internal combustion engines in accordance with the requirements of **2.4.3 Part D of the Rules for the Survey and Construction of Steel Ships**.	**10.1.1 Scope** **1** The requirements in this Chapter apply to testing and inspection for approval of use of crankcase explosion relief valves for reciprocating internal combustion engines in accordance with the requirements of **2.4.3 Part D of the Rules for the Survey and Construction of Steel Ships**.	Terminology alignment
10.2 Application	**10.2 Application**	
10.2.1 Application Form The manufacturer, who intends to obtain the type approval, is to submit the appropriate application form (**Form**	**10.2.1 Application Form** The manufacturer, who intends to obtain the approval of use, is to submit the appropriate application form (**Form**	To delete the specification of the number of copies

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
6-10) filled in with necessary data and information to the Society (Head office).	**6-10**) filled in with necessary data and information to the Society (Head office).	due to digitization
10.2.2 Documents The documents listed **(1)** through **(7)** below, are to be submitted together with the application form specified in **10.2.1**. ((1) to (7) are omitted.)	**10.2.2 Documents** The documents listed **(1)** through **(7)** below, <u>each in triplicate,</u> are to be submitted together with the application form specified in **10.2.1**. ((1) to (7) are omitted.)	To delete the specification of the number of copies due to digitization
10.3 Approval Tests	**10.3 Approval Tests**	
10.3.5 Test Records The manufacturer is to prepare records of the approval test including the following information and documents after completion of the test, to obtain verification by the Society's attending surveyor and to submit them, to the Society. ((1) to (7) are omitted.)	**10.3.5 Test Records** The manufacturer is to prepare records of the approval test including the following information and documents after completion of the test, to obtain verification by the Society's attending surveyor and to submit them, <u>in triplicate,</u> to the Society. ((1) to (7) are omitted.)	To delete the specification of the number of copies due to digitization
10.4 Approval	**10.4 Approval**	
10.4.2 Renewal of Approval **1** The valid term of approval in the preceding **10.4.1** will be 5 *years* <u>from the date of approval. In case when the renewal of approval is carried out in accordance with the requirements in **2** and **4**, valid term will be 5 *years* from the next day after the expiry date of the previous validity.</u>	**10.4.2 Renewal of Approval** **1** The valid term of approval in the preceding **10.4.1** will be 5 *years*.	Change in description
2 In case where renewal of validity is intended, the	**2** In case where renewal of validity is intended, the	Terminology alignment

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
manufacturer is to submit a copy of the existing certificate of approval in accordance with the requirements of **10.2** newly. In this case, the data required per **10.2** may be limited to the portion subjected to modification only.	manufacturer is to submit a copy of the existing certificate in accordance with the requirements of **10.2** newly. In this case, the data required per **10.2** may be limited to the portion subjected to modification only.	
Chapter 11 TYPE APPROVAL FOR EXHAUST DRIVEN TURBOCHARGERS	**Chapter 11 APPROVAL OF USE FOR EXHAUST DRIVEN TURBOCHARGERS**	Terminology alignment
11.2 Application	**11.2 Application**	
11.2.2 Documents The drawings and data required by **2.1.3-1(1) and (2), Part D of the Rules for the Survey and Construction of Steel Ships** applicable to the turbocharger which is intended for type approval as well as the data listed in **(1)** through **(6)** below, are to be submitted together with the application form specified in **11.2.1**. ((1) to (6) are omitted.)	**11.2.2 Documents** The drawings and data required by **2.1.3-1(1) and (2), Part D of the Rules for the Survey and Construction of Steel Ships** applicable to the turbocharger which is intended for approval as well as the data listed in **(1)** through **(6)** below, each in triplicate, are to be submitted together with the application form specified in **11.2.1**. ((1) to (6) are omitted.)	To delete the specification of the number of copies due to digitization
11.4 Approval Tests	**11.4 Approval Tests**	
11.4.2 Details of Tests **1** Turbochargers for any speed engines are to be subjected to at least 500 load cycles (idle - full load - idle) at the limits of their operation. However, this test may be waived if the turbocharger together with the engine is	**11.4.2 Details of Tests** **1** Turbochargers for any speed engines are to be subjected to at least 500 load cycles (idle - full load - idle) at the limits of their operation. However, this test may be waived if the turbocharger together with the engine is	Terminology alignment

Amended	Original	Remarks
subjected to this kind of low cycle testing under the type approval of reciprocating internal combustion engines in **Chapter 8, Part 6**. The suitability of the turbocharger for such kind of operation is to be stated in advance by the manufacturer.	subjected to this kind of low cycle testing under the approval of use of reciprocating internal combustion engines in **Chapter 8, Part 6**. The suitability of the turbocharger for such kind of operation is to be stated in advance by the manufacturer.	
11.5 Approval	**11.5 Approval**	
11.5.2 Term of Validity The term of validity of the approval will be five *years* from the date of approval. In case when the renewal of approval is carried out in accordance with the requirements in **2** and **4**, valid term will be 5 *years* from the next day after the expiry date of the previous validity.	**11.5.2 Term of Validity** The term of validity of the approval will be five *years* from the date of approval.	Change in description
Chapter 12 TYPE APPROVAL OF WELDED TYPE PIPE JOINTS UNDER SPECIAL REQUIREMENTS	**Chapter 12 APPROVAL OF USE OF WELDED TYPE PIPE JOINTS UNDER SPECIAL REQUIREMENTS**	Terminology alignment
12.1 General	**12.1 General**	
12.1.1 Scope In accordance with the requirements in **D12.6.1-1(1)(a)**, **Part D of the Guidance for the Survey and Construction of Steel Ships** (hereinafter referred to as "the Guidance"), **N5.12.1-1(5)**, **Part N of the Guidance**, **Table**	**12.1.1 Scope** In accordance with the requirements in **D12.6.1-1(1)(a)**, **Part D of the Guidance for the Survey and Construction of Steel Ships** (hereinafter referred to as "the Guidance"), **N5.12.1-1(5)**, **Part N of the Guidance**, **Table**	Change in description

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
S5.4.1-2, Part S of the Guidance, the requirements of this chapter apply to the tests and inspections, etc. for the type approval for pipe joints of a butt welded type and pipe joints of a slip-on sleeve welded type (such as elbows, reducers, tees, bends and sockets, etc.). In cases where this approval is obtained, materials complying with international or national standards such as *ISO*, *JIS*, etc. can be used, and surveyor attendance at shop tests may be omitted in accordance with the requirements of **D12.6.1-1(1)(e)ii), Part D of the Guidance for the Survey and Construction of Steel Ships**.	**S5.4.1-2, Part S of the Guidance**, the requirements of this chapter apply to the tests and inspections, etc. for the approval of use for pipe joints of a butt welded type and pipe joints of a slip-on sleeve welded type (hereinafter referred to as "pipe joints") made of materials complying with international or national standards such as *ISO*, *JIS*, etc.	
12.2 Approval Application	**12.2 Approval Application**	
12.2.1 Approval Application Form Manufacturers who apply for approval are to submit an application form filled in with the required items to the Society (Head Office).	**12.2.1 Approval Application Form** Manufacturers who apply for approval are to submit a single copy of an application form filled in with the required items to the Society (Head Office).	To delete the specification of the number of copies due to digitization
12.2.2 Data to be Submitted **1** The reference data listed in **(1)** through **(9)** below, are to be submitted together with the application form specified in **12.2.1**. ((1) to (9) are omitted.)	**12.2.2 Data to be Submitted** **1** The reference data listed in **(1)** through **(9)** below, three copies each, are to be submitted together with the application form specified in **12.2.1**. ((1) to (9) are omitted.)	To delete the specification of the number of copies due to digitization
12.4 Approval Tests	**12.4 Approval Tests**	
12.4.5 Test Reports **1** Manufacturers are to prepare test reports upon	**12.4.5 Test Reports** **1** Manufacturers are to prepare test reports upon	To delete the specification

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
completion of tests, obtain the surveyor's signature thereon, and submit them, to the Society (Head Office).	completion of tests, obtain the surveyor's signature thereon, and submit them, in triplicate, to the Society (Head Office).	of the number of copies due to digitization
12.5 Approval Tests	**12.5 Approval Tests**	
12.5.3 Renewal of Approval **1** In the case of an application for renewal of approval, the applicant is to submit an application form as well as the "Certificate of Approval" and actual manufacturing record data (for example, chemical composition, mechanical properties and outer diameter and thickness expressed in the form of histograms or statistics for each heat treatment) for the pipe joint within a specific period of time.	**12.5.3 Renewal of Approval** **1** In the case of an application for renewal of approval, the applicant is to submit an application form as well as a copy of the "Certificate of Approval" and three copies of actual manufacturing record data (for example, chemical composition, mechanical properties and outer diameter and thickness expressed in the form of histograms or statistics for each heat treatment) for the pipe joint within a specific period of time.	To delete the specification of the number of copies due to digitization
12.5.4 Changes in Approved Content **1** In cases where any of the changes in approved content given in the following **(1)** through **(5)** occur, documents corresponding to the requirements in **12.2.2** are to be submitted to the Society (Head Office), in addition to the "Certificate of Approval". However, the data to be submitted may be limited to reference data for the changes made. ((1) to (5) are omitted.)	**12.5.4 Changes in Approved Content** **1** In cases where any of the changes in approved content given in the following **(1)** through **(5)** occur, three copies of documents corresponding to the requirements in **12.2.2** are to be submitted to the Society (Head Office), in addition to a copy of the "Certificate of Approval". However, the data to be submitted may be limited to reference data for the changes made. ((1) to (5) are omitted.)	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
Chapter 13 TYPE APPROVAL OF EXPLOSION RELIEF DEVICES PROVIDED FOR COMBUSTION AIR INLET MANIFOLDS AND FOR EXHAUST GAS MANIFOLDS COMPOSING EXHAUST SYSTEMS FOR RECIPROCATING INTERNAL COMBUSTION ENGINES USING GAS AS FUEL	**Chapter 13 APPROVAL OF USE OF EXPLOSION RELIEF DEVICES PROVIDED FOR COMBUSTION AIR INLET MANIFOLDS AND FOR EXHAUST GAS MANIFOLDS COMPOSING EXHAUST SYSTEMS FOR RECIPROCATING INTERNAL COMBUSTION ENGINES USING GAS AS FUEL**	Terminology alignment
13.1 General	**13.1 General**	
13.1.1 Scope This chapter applies to the tests and inspections required for the type approval of explosion relief devices provided for air inlet manifolds, scavenge spaces (hereinafter referred to collectively in this chapter as "combustion air inlet manifolds") and for exhaust gas manifolds composing exhaust systems for reciprocating internal combustion engines using gas as fuel in accordance with **10.2.2-2** or **10.3.1-1, Part GF** or **16.7.1-4, Part N of the Rules for the Survey and Construction of Steel Ships**.	**13.1.1 Scope** This chapter applies to the tests and inspections required for the approval of use of explosion relief devices provided for air inlet manifolds, scavenge spaces (hereinafter referred to collectively in this chapter as "combustion air inlet manifolds") and for exhaust gas manifolds composing exhaust systems for reciprocating internal combustion engines using gas as fuel in accordance with **10.2.2-2** or **10.3.1-1, Part GF** or **16.7.1-4, Part N of the Rules for the Survey and Construction of Steel Ships**.	Terminology alignment
13.2 Application	**13.2 Application**	
13.2.1 Application Forms Manufacturers who intend to obtain type approval are to submit a completed appropriate application form (**Form 6-13**) to the Society's Head Office.	**13.2.1 Application Forms** Manufacturers who intend to obtain approval of use are to submit a completed appropriate application form (**Form 6-13**) to the Society's Head Office.	Terminology alignment

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
13.2.2 Documents The following documents listed in **(1)** through **(9)** below, are to be submitted together with the application forms specified in **13.2.1**. ((1) to (9) are omitted.)	**13.2.2 Documents** The following documents listed in **(1)** through **(9)** below, each in triplicate, are to be submitted together with the application forms specified in **13.2.1**. ((1) to (9) are omitted.)	To delete the specification of the number of copies due to digitization
13.3 Approval Tests	**13.3 Approval Tests**	
13.3.3 Explosion Tests Explosion testing is to be performed in two stages according to following **(1)** and **(2)** for *ERD* that requires type approval. Explosion testing is to be witnessed by the Society's surveyor. Calibration records for instrumentation used to collect data are to be presented to attending surveyor for review. ((1) and (2) are omitted.)	**13.3.3 Explosion Tests** Explosion testing is to be performed in two stages according to following **(1)** and **(2)** for *ERD* that requires approval of use. Explosion testing is to be witnessed by the Society's surveyor. Calibration records for instrumentation used to collect data are to be presented to attending surveyor for review. ((1) and (2) are omitted.)	Terminology alignment
13.3.5 Test Reports Manufacturers are to prepare test reports for the demonstration tests specified in **13.3.2** and the explosion tests specified in **13.3.3.** Such reports are to include the following information and relevant documents are to be verified by attending surveyors and then submitted, to the Society after completion of the tests. ((1) to (5) are omitted.)	**13.3.5 Test Reports** Manufacturers are to prepare test reports for the demonstration tests specified in **13.3.2** and the explosion tests specified in **13.3.3.** Such reports are to include the following information and relevant documents are to be verified by attending surveyors and then submitted, in triplicate, to the Society after completion of the tests. ((1) to (5) are omitted.)	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
13.4 Approval	**13.4 Approval**	
13.4.2 Renewal of Approval **1** The valid term of the approval referred to in **13.4.1** is 5 *years* from the date of approval. In case when the renewal of approval is carried out in accordance with the requirements in **2** and **4**, valid term will be 5 *years* from the next day after the expiry date of the previous validity.	**13.4.2 Renewal of Approval** **1** The valid term of the approval referred to in **13.4.1** is 5 *years*.	Change in description
Part 7 CONTROL AND INSTRUMENTATION EQUIPMENT AND ELECTRICAL INSTALLATIONS	**Part 7 CONTROL AND INSTRUMENTATION EQUIPMENT AND ELECTRICAL INSTALLATIONS**	
Chapter 1 TYPE APPROVAL OF AUTOMATIC DEVICES AND EQUIPMENT	**Chapter 1 APPROVAL OF USE OF AUTOMATIC DEVICES AND EQUIPMENT**	
1.1 General	**1.1 General**	
1.1.1 Scope The requirements in this chapter apply to tests and inspection for type approval of automatic devices and equipment (hereinafter referred to as "the equipment" in this chapter) in accordance with **18.7.2, Part D of the Rules for the Survey and Construction of Steel Ships**. In this case, part or all of the tests at the manufacturer may be omitted in	**1.1.1 Scope** The requirements in this chapter apply to tests and inspection for the approval to exempt the shop tests partially or entirely for automatic devices and equipment (hereinafter referred to as "the equipment" in this chapter) intended to be installed in ship in accordance with **18.7.2, Part D of the Rules for the Survey and Construction of Steel Ships**.	Terminology alignment Change in description

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
accordance with **18.7.2-2, Part D of the Rules for the Survey and Construction of Steel Ships.**		
1.2 Application Procedures	**1.2 Application Procedures**	
1.2.1 Application Procedures The manufacturer (applicant) of the equipment intended to be applied the requirements in this chapter is to submit the appropriate application form (**Form 7-1**) accompanied with the following drawings and documents to the Society. ((1) to (7) are omitted.) (8) Information on the manufacturing and quality control standards of the said devices and equipment (9) Past records of products of the said devices and equipment (if any) ((10) and (11) are omitted.)	**1.2.1 Application Procedures** The manufacturer (applicant) of the equipment intended to be applied the requirements in this chapter is to submit the appropriate application form (**Form 7-1**) accompanied with three copies each of the following drawings and documents to the Society. ((1) to (7) are omitted.) (8) Inspection and test specification for quality control (including test data) (9) Past records of products (if any) ((10) and (11) are omitted.)	To delete the specification of the number of copies due to digitization
1.3 Environmental Test	**1.3 Environmental Test**	
1.3.2 Test Records After completion of the test, the manufacturer is to produce a report of the test and is to submit it to the Society upon receiving confirmation from the Society's surveyor.	**1.3.2 Test Records** After completion of the test, the manufacturer is to produce a report of the test and is to submit three copies to the Society upon receiving confirmation from the Society's surveyor.	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
1.4 Approval	**1.4 Approval**	
1.4.1 Certificate When the results of the tests specified in **1.3.1** are confirmed appropriate, the Society approves the equipment (hereinafter referred to as "approved equipment") and issues the relevant approval certificate, which specifies the approval number, date of approval, type, and model.	**1.4.1 Certificate** When the results of the tests specified in **1.3.1** are confirmed appropriate, the Society approves the equipment (hereinafter referred to as "approved equipment") and issues the relevant approval certificate.	Change in description
1.4.3 Renewal of Approval **2** When the specifications of the approved equipment remain unchanged, the Society approves the renewal of approval and issues a new approval certificate. The manufacturer who received the new approval certificate is to return the existing certificate to the Society as soon as possible.	**1.4.3 Renewal of Approval** **2** When the specifications of the approved equipment remain unchanged, the Society approves the renewal of approval and issues a new certificate. The manufacturer who received the new certificate is to return the existing certificate to the Society as soon as possible.	Terminology alignment
1.5 Changes in Particulars, etc. of Approved Equipment	**1.5 Changes in Particulars, etc. of Approved Equipment**	
1.5.1 Changes in Particulars, etc. of Approved Equipment **1** In cases where the particulars of the approved equipment or materials, construction, dimensions, etc. of major components of the approved equipment are intended to be changed, the manufacturer is to submit to the Society the appropriate application form for changes (**Form 7-1**) accompanied with the following drawings and documents. (1) Explanatory notes for changes	**1.5.1 Changes in Particulars, etc. of Approved Equipment** **1** In cases where the particulars of the approved equipment or materials, construction, dimensions, etc. of major components of the approved equipment are intended to be changed, the manufacturer is to submit to the Society the appropriate application form for changes (**Form 7-1**) accompanied with the following drawings and documents. (1) Explanatory notes for changes (three copies)	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
(2) Necessary drawings and documents (3) A copy of the certificate previously issued	(2) Necessary drawings and documents (three copies each) (3) A copy of the certificate previously issued	
3 When confirmation tests are carried out, the manufacturer is to produce a report of the test and is to submit it to the Society upon receiving confirmation from the Society's surveyor.	**3** When confirmation tests are carried out, the manufacturer is to produce a report of the test and is to submit three copies to the Society upon receiving confirmation from the Society's surveyor.	To delete the specification of the number of copies due to digitization
4 When the results of the examination for the drawings and documents and the confirmation test specified in **-1** to **-3** are confirmed to be satisfactory, the Society reissues the approval certificate with contents duly revised. The manufacturer who received the new approval certificate is to return the existing approval certificate to the Society as soon as possible.	**4** When the results of the examination for the drawings and documents and the confirmation test specified in **-1** to **-3** are confirmed to be satisfactory, the Society reissues the certificate with contents duly revised. The manufacturer who received the new certificate is to return the existing certificate to the Society as soon as possible.	Terminology alignment
5 In the case specified in **-4**, the validity of the approval certificate is not changed in principle.	**5** In the case specified in **-4**, the validity of the certificate is not changed in principle.	Terminology alignment
1.6 Revocation of Approval	**1.6 Revocation of Approval**	
1.6.1 Revocation of Approval	**1.6.1 Revocation of Approval**	
1 In cases where any of the following **(1)** to **(5)** is applicable, the Society may revoke approval based on the requirements in this chapter. In such cases, the Society is to notify the manufacturer of this revocation. (1) (Omitted) (2) Where the valid term of the approval certificate has expired. ((3) to (5) are omitted.)	**1** In cases where any of the following **(1)** to **(5)** is applicable, the Society may revoke approval based on the requirements in this chapter. In such cases, the Society is to notify the manufacturer of this revocation. (1) (Omitted) (2) Where the valid term of the certificate has expired. ((3) to (5) are omitted.)	Terminology alignment
2 The manufacturer who received a notice of revocation of approval is to return the approval certificate of the relevant	**2** The manufacturer who received a notice of revocation of approval is to return the certificate of the relevant	Terminology alignment

Amended-Original Requirements Comparison Table
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Amended	Original	Remarks
equipment to the Society immediately.	equipment to the Society immediately.	
Chapter 2 TYPE APPROVAL OF LOADING COMPUTER	**Chapter 2 APPROVAL OF USE OF LOADING COMPUTER**	
2.2 Application Procedure	**2.2 Application Procedure**	
Any manufacturer (applicant) of the loading computers and stability computers, intended to be applied the requirements in this chapter, is to submit the appropriate application form (**Form7-2**) accompanied with the following drawings and documents to the Society: ((1) and (2) are omitted.) (3) Information on the manufacturing and quality control standards of the said computer (4) Records of manufacture and delivery said computer (if any) ((5) and (6) are omitted.)	Any manufacturer (applicant) of the loading computers and stability computers, intended to be applied the requirements in this chapter, is to submit the appropriate application form (**Form7-2**) accompanied with three copies each of the following drawings and documents to the Society: ((1) and (2) are omitted.) (3) Inspection and test specification for quality control (including past data) (4) Records of manufacture and delivery (if any) ((5) and (6) are omitted.)	Change in description
2.4 Tests and Inspection	**2.4 Tests and Inspection**	
2.4.2 Certificates When the results of tests specified in **2.4.1** are confirmed appropriate, the Society approves the equipment and issues approval certificate which specifies the approval number, date of approval, type, and model.	**2.4.2 Certificates** When the results of tests specified in **2.4.1** are confirmed appropriate, the Society approves the equipment and issues certificate specifically provided for.	Change in description

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
2.4.3 Terms of Validity The above certificate is valid for 5 *years* from the date of approval. In case when the renewal of approval is carried out in accordance with the requirements in **2.4.4**, valid term will be 5 *years* from the next day after the expiry date of the previous validity.	**2.4.3 Terms of Validity** The above certificate is valid for 5 *years*.	Change in description
2.4.4 Renewal of Validity In case of application for renewal of approval, the manufacturer is to submit to the Society the appropriate application form (Specimen **Form 7-2**) accompanied with a copy of the approval certificate previously issued. The change of the specification, if any, is to be described in the application. Where the specifications of the approved equipment remain unchanged, the approval certificate will be issued with another 5 *years* valid term by the Society. Manufacturers whose renewal is approved are to return the existing approval certificate to the Society as soon as possible after receiving the new approval certificate and the term of validity of the existing approval certificate expires.	**2.4.4 Renewal of Validity** For renewal of validity, the manufacturer is to submit to the Society the appropriate application form (Specimen **Form 7-2**) accompanied with a copy of the certificate previously issued. The change of the specification, if any, is to be described in the application. Where the specifications of the approved equipment remain unchanged, the certificate will be issued with another 5 *years* valid term by the Society. Manufacturers whose renewal is approved are to return the existing certificate to the Society as soon as possible after receiving the new certificate and the term of validity of the existing certificate expires.	Change in description
2.5 Changes in Particulars, Material, Construction, etc. of Approved Equipment	**2.5 Changes in Particulars, Material, Construction, etc. of Approved Equipment**	
2.5.1 Changes in Particulars, Material, Construction, etc. of Approved Equipment **1** In case where the particulars, materials, construction, dimensions, etc. of major components of the approved equipment are intended to be changed, the manufacturer is to	**2.5.1 Changes in Particulars, Material, Construction, etc. of Approved Equipment** **1** In case where the particulars, materials, construction, dimensions, etc. of major components of the approved equipment are intended to be changed, the manufacturer is to	To delete the specification of the number of copies due to digitization

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Amended	Original	Remarks
be submit to the Society the appropriate application form for changes (**Form 7-2**), explanatory notes for changes and necessary drawings, accompanied with a copy of the approval certificate previously issued.	be submit to the Society each three copies of the appropriate application form for changes (**Form 7-2**), explanatory notes for changes and necessary drawings, accompanied with a copy of the certificate previously issued.	
3 In case the results of confirmation tests specified in **-2** are deemed appropriate, a new approval certificate will be issued by the Society. In this case, the previously issued approval certificate is to be returned to the Society as soon as possible after receiving the new approval certificate.	**3** In case the results of confirmation tests specified in **-2** are deemed appropriate, a new certificate will be issued by the Society. In this case, the previously issued certificate is to be returned to the Society as soon as possible after receiving the new certificate.	Terminology alignment
2.6 Invalidation of Approved Products	**2.6 Invalidation of Approved Products**	
2.6.1 Invalidation of Approved Products	**2.6.1 Invalidation of Approved Products**	
1 In case either of the following is relevant, approval of the product will be invalidated: (1) (Omitted) (2) Where the valid term of the approval certificate has expired. ((3) and (4) are omitted.)	**1** In case either of the following is relevant, approval of the product will be invalidated: (1) (Omitted) (2) Where the valid term of the certificate has expired. ((3) and (4) are omitted.)	Terminology alignment
2 Any manufacturer who has received notice of revocation of approval should return the approval certificate of the relevant equipment to the Society.	**2** Any manufacturer who has received notice of revocation of approval should return the certificate of the relevant equipment to the Society.	Terminology alignment

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Amended	Original	Remarks
Chapter 3 APPROVAL OF CABLE LAYING	**Chapter 3 APPROVAL OF CABLE LAYING**	
3.2 Application Procedures	**3.2 Application Procedures**	
3.2.2 Documents for Submission The manufacturer or constructor intended to obtain the approval of the fire stop methods is to submit drawings and documents specified in **(1)** for the approval of the fire stop methods, and similarly those specified in **(2)** for the approval of non-metallic cable supports, together with the appropriate application form specified in **3.2.1**. (1) For fire stop methods (a) Specification (including detailed construction plan) (b) Characteristic of materials (c) Instructions for work procedures (in case of paints being used, the painting method and procedure including painting condition and the thickness of dry paint film are to be specified) (d) Approval test plan (*see* **3.4.1**) (e) Copies of certificates or test records issued by official organizations (if any) (f) Information on the quality control standards of the said fire stop methods (g) Past records of said fire stop methods (if any) (h) Other documents as deemed necessary by the Society. (2) For non-metallic cable supports (a) Type name	**3.2.2 Documents for Submission** The manufacturer or constructor intended to obtain the approval of the fire stop methods is to submit three copies each of drawings and documents specified in **(1)** for the approval of the fire stop methods, and similarly those specified in **(2)** for the approval of non-metallic cable supports, together with the appropriate application form specified in **3.2.1**. (1) For fire stop methods (a) Specification (including detailed construction plan) (b) Characteristic of materials (c) Instructions for work procedures (in case of paints being used, the painting method and procedure including painting condition and the thickness of dry paint film are to be specified) (d) Approval test plan (*see* **3.4.1**) (e) Copies of certificates or test records issued by official organizations (if any) (Newly added) (f) Other documents as deemed necessary by the Society. (2) For non-metallic cable supports (a) Type name	To delete the specification of the number of copies due to digitization Addition of requirements related to quality control

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Amended	Original	Remarks
(b) Construction plan (including principal dimensions) (c) Characteristic of materials (d) Approval test plan (*see* **3.4.2**) (e) Copies of certificates or test records issued by official organizations (if any) (f) Information on the quality control standards of the said non-metallic cable supports (g) Past records of said non-metallic cable supports (if any) (h) Other documents as deemed necessary by the Society.	(b) Construction plan (including principal dimensions) (c) Characteristic of materials (d) Approval test plan (*see* **3.4.2**) (e) Copies of certificates or test records issued by official organizations (if any) (Newly added) (Newly added) (f) Other documents as deemed necessary by the Society.	Addition of requirements related to quality control
3.4.4 Test Records **1** After the approval test has been completed, the manufacturer or constructor is to prepare the approval test records and to submit them to the Society after being verified by the Society's surveyor.	**3.4.4 Test Records** **1** After the approval test has been completed, the manufacturer or constructor is to prepare the approval test records and to submit three copies of them to the Society after being verified by the Society's surveyor.	To delete the specification of the number of copies due to digitization
3.5 Approval	**3.5 Approval**	
3.5.2 Term of Validity The term of validity of the approval is to be 5 *years* from the day of approval. In case when the renewal of approval is carried out in accordance with the requirements in **3.5.3**, valid term will be 5 *years* from the next day after the expiry date of the previous validity.	**3.5.2 Term of Validity** The term of validity of the approval is to be 5 *years* counting from the day of approval.	Change in description

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Amended	Original	Remarks
Chapter 4 TYPE APPROVAL OF LEVEL INDICATORS	**Chapter 4 APPROVAL OF USE OF LEVEL INDICATORS**	Terminology alignment
4.2 Application	**4.2 Application**	
4.2.1 Application Form The company, who intends to obtain type approval for level indicators are to submit the appropriate application form (**Form 7-4**) filled in with necessary data and information to the Society (Head Office).	**4.2.1 Application Form** The company, who intends to obtain approval for the use of level indicators are to submit the appropriate application form (**Form 7-4**) filled in with necessary data and information to the Society (Head Office).	To delete the specification of the number of copies due to digitization
4.2.2 Applicant **2** Manufacturers of parts of the said devices may be considered as approval applicants in case type approvals for the parts are desired.	**4.2.2 Applicant** **2** Manufacturers of parts of the said devices may be considered as approval applicants in case approvals for the use of the parts are desired.	Terminology alignment
4.2.3 Documents The drawings and data in the following **(1)** through **(9)** are to be submitted together with the application form specified in **4.2.1**. ((1) to (9) are omitted.)	**4.2.3 Documents** Three copies each of the drawings and data in the following **(1)** through **(9)** are to be submitted together with the application form specified in **4.2.1**. ((1) to (9) are omitted.)	To delete the specification of the number of copies due to digitization
4.4 Approval Test	**4.4 Approval Test**	
4.4.4 Test Records **1** After completion of the approval test, the manufacturer is to prepare a record of the approval test and is to submit it to the Society after getting verification by the	**4.4.4 Test Records** **1** After completion of the approval test, the manufacturer is to prepare a record of the approval test and is to submit three copies to the Society after getting	To delete the specification of the number of copies due to digitization

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Amended	Original	Remarks
surveyor of the Society.	verification by the surveyor of the Society.	
4.5 Approval	**4.5 Approval**	
4.5.2 Term of Validity The term of validity of the approval of level indicator is not to exceed 5 *years* from the date of approval. In case when the renewal of approval is carried out in accordance with the requirements in **4.5.3**, valid term will be 5 years from the next day after the expiry date of the previous validity.	**4.5.2 Term of Validity** The term of validity of the approval of level indicator is not to exceed 5 *years* from the date of approval.	Change in description
4.5.3 Renewal of Approval **1** The manufacturer, who intends to have a continuation of the type approval already expired or to make partial technical modifications of the level indicator, is to submit the appropriate application form (**Form 7-4E**) in accordance with the requirements of **4.2** newly. In this case, the data required per **4.2.3** may be limited to the portion subjected to modification only.	**4.5.3 Renewal of Approval** **1** The manufacturer, who intends to have a continuation of the approval already expired or to make partial technical modifications of the level indicator, is to submit the appropriate application form (**Form 7-4E**) in accordance with the requirements of **4.2** newly. In this case, the data required per **4.2.3** may be limited to the portion subjected to modification only.	Terminology alignment To delete the specification of the number of copies due to digitization
4.5.4 Revocation of Approval In case where either of the following **(1)** to **(4)** applies, the Society will revoke the type approval of level indicators, and give notice to the manufacturer. (1) When renewal procedures were not undertaken without any special reason. (2) In association with the implementation or revision of international conventions, laws and regulations, the machinery and equipment for which the type approval was granted do not deserve the approval any longer.	**4.5.4 Revocation of Approval** In case where either of the following **(1)** to **(4)** applies, the Society will revoke the approval for use of level indicators, and give notice to the manufacturer. (1) When renewal procedures were not undertaken without any special reason. (2) In association with the implementation or revision of international conventions, laws and regulations, the machinery and equipment for which the approval was granted do not deserve the approval any longer.	Terminology alignment

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Amended	Original	Remarks
(3) When serious shortcomings are found in structure or quality of the level indicator already type approved after being installed in ships. (4) When an application for revocation is made by the manufacturer.	(3) When serious shortcomings are found in structure or quality of the level indicator already approved after being installed in ships. (4) When an application for revocation is made by the manufacturer.	
4.6 Handling after Approval	**4.6 Handling after Approval**	
4.6.1 Tests and Inspection on the Individual Product Tests and inspection at the manufacturing plant of liquid level indicators which have been obtained the type approval may be limited to those specified in the approved certificate mentioned in **4.5.1-1** notwithstanding the relevant requirement of the Rules and their Guidance.	**4.6.1 Tests and Inspection on the Individual Product** Tests and inspection at the manufacturing plant of liquid level indicators which have been obtained the approval for use may be limited to those specified in the approved certificate mentioned in **4.5.1-1** notwithstanding the relevant requirement of the Rules and their Guidance	Terminology alignment
Chapter 5 TYPE APPROVAL OF WATER LEVEL DETECTION AND ALARM SYSTEMS	**Chapter 5 APPROVAL OF USE OF WATER LEVEL DETECTION AND ALARM SYSTEMS**	
5.2 Application	**5.2 Application**	
5.2.1 Application Form The company, who intends to obtain the type approval of water level detection and alarm systems are to submit the appropriate application form (**Form 7-5**) filled in with necessary data and information to the Society (Head Office).	**5.2.1 Application Form** The company, who intends to obtain the approval of use of water level detection and alarm systems are to submit the appropriate application form (**Form 7-5**) filled in with necessary data and information to the Society (Head Office).	To delete the specification of the number of copies due to digitization

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Amended	Original	Remarks
5.2.2 Applicant **2** Manufacturers of parts of the said systems may be allowed as an applicant for the type approval regarding the parts.	**5.2.2 Applicant** **2** Manufacturers of parts of the said systems may be allowed as an applicant for the approval of use regarding the parts.	Terminology alignment
5.2.3 Documents The drawings and data in the following **(1)** through **(9)** are to be submitted together with the application form specified in **5.2.1**. ((1) to (9) are omitted.)	**5.2.3 Documents** Three copies each of the drawings and data in the following **(1)** through **(9)** are to be submitted together with the application form specified in **5.2.1**. ((1) to (9) are omitted.)	To delete the specification of the number of copies due to digitization
5.4 Approval Test	**5.4 Approval Test**	
5.4.4 Test Records **1** After completion of the approval test, the manufacturer is to prepare a record of the approval test and is to submit it to the Society after verification by the attending surveyor.	**5.4.4 Test Records** **1** After completion of the approval test, the manufacturer is to prepare a record of the approval test and is to submit three copies to the Society after verification by the attending surveyor.	To delete the specification of the number of copies due to digitization
5.5 Approval	**5.5 Approval**	
5.5.1 Notice of Approval The Society, when satisfied upon examination of the submitted documents as required per **5.2** to **5.4** and the attending surveyor's report, will type approve the water level detection and alarm system. In this case, the Society will issue a certificate of approval specifying the approval number,	**5.5.1 Notice of Approval** The Society, when satisfied upon examination of the submitted documents as required per **5.2** to **5.4** and the attending surveyor's report, will approve the use of the water level detection and alarm system. In this case, the Society will issue a certificate of approval specifying the approval	Terminology alignment

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Amended	Original	Remarks
approval date, items of approval and approval conditions, and put approval stamps on the documents as deemed necessary by the Society out of those submitted in accordance with **5.2.3** and **5.4.4**, and return them back to the applicant.	number, approval date, items of approval and approval conditions, and put approval stamps on the documents as deemed necessary by the Society out of those submitted in accordance with **5.2.3** and **5.4.4**, and return them back to the applicant.	
5.5.2 Term of Validity The term of validity of the type approval is not to exceed five *years* from the date of approval. In case when the renewal of approval is carried out in accordance with the requirements in **5.5.3**, valid term will be 5 years from the next day after the expiry date of the previous validity.	**5.5.2 Term of Validity** The term of validity of the approval is not to exceed five *years* from the date of approval.	Change in description
5.5.3 Renewal of Approval **1** The manufacturer, who intends to have a continuation of the type approval to be expired or to make partial technical modifications of the system, is to submit the appropriate application form (**Form 7-5E**) in accordance with the requirements of **5.2** newly. In this case, the data required per **5.2.3** may be limited to the portion subjected to modification only.	**5.5.3 Renewal of Approval** **1** The manufacturer, who intends to have a continuation of the approval to be expired or to make partial technical modifications of the system, is to submit the appropriate application form (**Form 7-5E**) in accordance with the requirements of **5.2** newly. In this case, the data required per **5.2.3** may be limited to the portion subjected to modification only.	Terminology alignment To delete the specification of the number of copies due to digitization
5.5.4 Revocation of Approval In case where either of the following **(1)** to **(4)** applies, the Society will revoke the type approval of the water level detection and alarm system, and give a notice to the manufacturer. (1) When renewal procedures were not undertaken without any special reason. (2) In association with the implementation or revision of international conventions, laws and regulations, the system for which the type approval was granted do not	**5.5.4 Revocation of Approval** In case where either of the following **(1)** to **(4)** applies, the Society will revoke the approval of use of the water level detection and alarm system, and give a notice to the manufacturer. (1) When renewal procedures were not undertaken without any special reason. (2) In association with the implementation or revision of international conventions, laws and regulations, the system for which the approval was granted do not	Terminology alignment

Amended	Original	Remarks
deserve the approval any longer. (3) When serious shortcomings are found in structure or quality of the water level detection and alarm system already type approved after being installed in ships. (4) When an application for revocation is made by the manufacturer.	deserve the approval any longer. (3) When serious shortcomings are found in structure or quality of the water level detection and alarm system already approved after being installed in ships. (4) When an application for revocation is made by the manufacturer.	
5.6 Handling after Approval	**5.6 Handling after Approval**	
5.6.1 Tests and Inspection on the Individual Product Tests and inspection at the manufacturer of the water level detection and alarm systems which has been obtained the type approval may be limited to those specified in the approved certificate mentioned in **5.5.1-1** notwithstanding the relevant requirement of the Rules and their Guidance	**5.6.1 Tests and Inspection on the Individual Product** Tests and inspection at the manufacturer of the water level detection and alarm systems which has been obtained the approval of use may be limited to those specified in the approved certificate mentioned in **5.5.1-1** notwithstanding the relevant requirement of the Rules and their Guidance	Terminology alignment
Chapter 6 TYPE APPROVAL OF CRANKCASE OIL MIST DETECTION ARRANGEMENTS	**Chapter 6 APPROVAL OF USE OF CRANKCASE OIL MIST DETECTION ARRANGEMENTS**	Terminology alignment
6.1 General	**6.1 General**	
6.1.1 Scope The requirements in this Chapter apply to testing and inspection for type approval of crankcase oil mist detection arrangements in accordance with the requirements of **2.4.5**	**6.1.1 Scope** The requirements in this Chapter apply to testing and inspection for use of crankcase oil mist detection arrangements in accordance with the requirements of **2.4.5**	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Part D of the Rules for the Survey and Construction of Steel Ships.	**Part D of the Rules for the Survey and Construction of Steel Ships**.	
6.2 Application	**6.2 Application**	
6.2.1 Application Form The manufacturer, who intends to obtain the type approval, is to submit the appropriate application form (**Form 7-6**) filled in with necessary data and information to the Society (Head office).	**6.2.1 Application Form** The manufacturer, who intends to obtain the approval of use, is to submit the appropriate application form (**Form 7-6**) filled in with necessary data and information to the Society (Head office).	To delete the specification of the number of copies due to digitization
6.2.2 Documents The documents listed **(1)** through **(10)** below, are to be submitted together with the application form specified in **6.2.1**. ((1) to (10) are omitted.)	**6.2.2 Documents** The documents listed **(1)** through **(10)** below, each in triplicate, are to be submitted together with the application form specified in **6.2.1**. ((1) to (10) are omitted.)	To delete the specification of the number of copies due to digitization
6.3 Approval Tests	**6.3 Approval Tests**	
6.3.5 Test Records The manufacturer is to prepare records of the approval test including the following information and documents after completion of the test, to obtain verification by the Society's attending surveyor and to submit them, to the Society. ((1) to (3) are omitted.)	**6.3.5 Test Records** The manufacturer is to prepare records of the approval test including the following information and documents after completion of the test, to obtain verification by the Society's attending surveyor and to submit them, in triplicate, to the Society. ((1) to (3) are omitted.)	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
6.4 Approval	**6.4 Approval**	
6.4.2 Renewal of Approval **1** The valid term of approval in the preceding **6.4.1** will be 5 *years* from the date of approval. In case when the renewal of approval is carried out in accordance with the requirements in **2** and **4**, valid term will be 5 *years* from the next day after the expiry date of the previous validity.	**6.4.2 Renewal of Approval** **1** The valid term of approval in the preceding **6.4.1** will be 5 *years*.	Change in description
6.5 Handling after Approval	**6.5 Handling after Approval**	
6.5.1 Tests and Inspection on the Individual Product Test and inspection at the manufacturer and on board of the oil mist detection arrangements which has been obtained the type approval may be limited to those specified in the approved certificate mentioned in **6.4.1** notwithstanding the relevant requirement of the Rules and their Guidance.	**6.5.1 Tests and Inspection on the Individual Product** Test and inspection at the manufacturer and on board of the oil mist detection arrangements which has been obtained the approval of use may be limited to those specified in the approved certificate mentioned in **6.4.1** notwithstanding the relevant requirement of the Rules and their Guidance.	Terminology alignment
Chapter 7 TYPE APPROVAL OF GAS DETECTION EQUIPMENT	**Chapter 7 APPROVAL OF USE OF GAS DETECTION EQUIPMENT**	Terminology alignment
7.2 Application	**7.2 Application**	
7.2.1 Application Form The manufacturer, who intends to obtain the type	**7.2.1 Application Form** The manufacturer, who intends to obtain the approval	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
approval , is to submit the appropriate application form (**Form 7-7**) filled in with necessary data and information to the Society (Head office).	of use, is to submit the appropriate application form (**Form 7-7**) filled in with necessary data and information to the Society (Head office).	
7.2.2 Documents The documents listed **(1)** through **(11)** below, are to be submitted together with the application form specified in **7.2.1**. ((1) to (11) are omitted.)	**7.2.2 Documents** The documents listed **(1)** through **(11)** below, each in triplicate, are to be submitted together with the application form specified in **7.2.1**. ((1) to (11) are omitted.)	To delete the specification of the number of copies due to digitization
7.4 Approval Test	**7.4 Approval Test**	
7.4.9 Test Records **1** After completion of the approval test, the manufacturer is to prepare a record of the approval test and is to submit it to the Society after verification by the attending surveyor.	**7.4.9 Test Records** **1** After completion of the approval test, the manufacturer is to prepare a record of the approval test and is to submit three copies to the Society after verification by the attending surveyor.	To delete the specification of the number of copies due to digitization
7.5 Approval	**7.5 Approval**	
7.5.1 Notice of Approval The Society, when satisfied upon examination of the submitted documents as required per **7.2** to **7.4** and the attending surveyor's report, will type approve the gas detection equipment. In this case, the Society will issue a certificate of approval specifying the approval number, approval date, items of approval and approval conditions, and put approval stamps on the documents as deemed necessary	**7.5.1 Notice of Approval** The Society, when satisfied upon examination of the submitted documents as required per **7.2** to **7.4** and the attending surveyor's report, will approve the use of the gas detection equipment. In this case, the Society will issue a certificate of approval specifying the approval number, approval date, items of approval and approval conditions, and put approval stamps on the documents as deemed necessary	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
by the Society out of those submitted in accordance with **7.2.2** and **7.4.9**, and return them back to the applicant.	by the Society out of those submitted in accordance with **7.2.2** and **7.4.9**, and return them back to the applicant.	
7.5.2 Term of Validity The term of validity of the approval of gas detection equipment is not to exceed five years from the date of approval. In case when the renewal of approval is carried out in accordance with the requirements in **7.5.3**, valid term will be 5 *years* from the next day after the expiry date of the previous validity.	**7.5.2 Term of Validity** The term of validity of the approval of gas detection equipment is not to exceed five years from the date of approval.	Change in description
7.6 Handling after Approval	**7.6 Handling after Approval**	
7.6.1 Tests and Inspection on the Individual Product Tests and inspection at the manufacturing plant of gas detection equipment which have been obtained the type approval may be limited to those specified in the approved certificate mentioned in **7.5.1-1** notwithstanding the relevant requirement of the Rules and their Guidance.	**7.6.1 Tests and Inspection on the Individual Product** Tests and inspection at the manufacturing plant of gas detection equipment which have been obtained the approval for use may be limited to those specified in the approved certificate mentioned in **7.5.1-1** notwithstanding the relevant requirement of the Rules and their Guidance.	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Chapter 8 TYPE APPROVAL OF COMPUTER BASED SYSTEMS	**Chapter 8 APPROVAL OF USE OF COMPUTER BASED SYSTEMS**	Terminology alignment
8.1 General	**8.1 General**	
8.1.1 Scope	**8.1.1 Scope**	
1 The requirements in this chapter apply to tests and inspection for "Type approval" of computer based systems belong to category II or III specified in **3.3.1, Part X of the Rules for the Survey and Construction of Steel Ships** in accordance with **18.1.3, Part D** and **3.2.2, Part X of the Rules for the Survey and Construction of Steel Ships**, **2.2.1-2 of the Guidance for Automatic and Remote Control Systems**, **12.1.3**, **Part 9 of the Rules for High Speed Craft** and **14.1.3**, **Part 7 of the Rules for the Survey and Construction of Inland Waterway Ships**.	**1** The requirements in this chapter apply to tests and inspection for "approval of use" of computer based systems belong to category II or III specified in **3.3.1, Part X of the Rules for the Survey and Construction of Steel Ships** in accordance with **18.1.3, Part D** and **3.2.2, Part X of the Rules for the Survey and Construction of Steel Ships**, **2.2.1-2 of the Guidance for Automatic and Remote Control Systems**, **12.1.3**, **Part 9 of the Rules for High Speed Craft** and **14.1.3**, **Part 7 of the Rules for the Survey and Construction of Inland Waterway Ships**.	Terminology alignment
2 Programmable devices installed into a computer based system which receives type approval in accordance with requirements of this chapter are to be subject to the environmental tests specified in **Table 7.1-1**. However, for programmable devices which have already received type approval from the Society, a part of or all environmental tests may be omitted.	**2** Programmable devices installed into a computer based system which receives approval of use in accordance with requirements of this chapter are to be subject to the environmental tests specified in **Table 7.1-1**. However, for programmable devices which have already received approval of use from the Society, a part of or all environmental tests may be omitted.	Terminology alignment
8.2 Application	**8.2 Application**	
8.2.1 Application Forms	**8.2.1 Application Forms**	
The manufacturer who makes an application for type	The manufacturer who makes an application for	To delete the specification

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
approval of the computer based system is to submit the appropriate application form (**Form 7-8**) filled in with necessary data and information to the Society.	approval of use of the computer based system is to submit the appropriate application form (**Form 7-8**) filled in with necessary data and information to the Society.	of the number of copies due to digitization
8.2.2 Documents to be submitted	**8.2.2 Documents to be submitted**	
1 The following documents are to be submitted to the Society with the application form specified in **8.2.1**. Summaries of said drawings and data are shown in **Table 7.8-1**. (1) (Omitted) (2) Drawings and data for reference: (a) An approval certificate issued in accordance with **Chapter 1, Part 7** or documents proving satisfaction with environmental tests specified in **7.1-1.** (b) Software test report (c) System test report (d) FAT report (e) Additional FAT documentation (e.g. user manuals) (f) Other drawings and data deemed necessary by the Society	**1** Three copies each of the following documents are to be submitted to the Society with the application form specified in **8.2.1**. Summaries of said drawings and data are shown in **Table 7.8-1**. (1) (Omitted) (2) Drawings and data for reference: (a) A certificate issued in accordance with **Chapter 1, Part 7** or documents proving satisfaction with environmental tests specified in **7.1-1.** (b) Software test report (c) System test report (d) FAT report (e) Additional FAT documentation (e.g. user manuals) (f) Other drawings and data deemed necessary by the Society	To delete the specification of the number of copies due to digitization Terminology alignment
8.4 Approval Test	**8.4 Approval Test**	
8.4.3 Test Records After completion of the test specified in **8.4.1**, the manufacturer is to produce a report of the test and is to submit it to the Society upon receiving confirmation from the Society's surveyor.	**8.4.3 Test Records** After completion of the test specified in **8.4.1**, the manufacturer is to produce a report of the test and is to submit three copies to the Society upon receiving confirmation from the Society's surveyor.	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
8.5 Approval	**8.5 Approval**	
8.5.1 Certificate When the results of the examinations of submitted drawings and data and the tests specified in **8.2** to **8.4** are confirmed appropriate, the Society approves the computer based system (hereinafter referred to as "approved computer based system") and issues the relevant approval certificate. which specifies the approval number, date of approval, type, and model.	**8.5.1 Certificate** When the results of the examinations of submitted drawings and data and the tests specified in **8.2** to **8.4** are confirmed appropriate, the Society approves the computer based system (hereinafter referred to as "approved computer based system") and issues the relevant approval certificate.	Change in description
8.5.2 Validity of Approval The certificate specified in **8.5.1** is to be valid for 5 *years* from its date of issue. However, when the approval is renewed in accordance with **8.5.3**, the new certificate is to be valid for 5 *years* from the date of expiry of the existing certificate.	**8.5.2 Validity of Approval** The certificate specified in **8.5.1** is to be valid until a date not exceeding 5 *years* from its date of issue. However, when the approval is renewed in accordance with **8.5.3**, the new certificate is to be valid until a date not exceeding 5 *years* from the date of expiry of the existing certificate.	Change in description
8.5.3 Renewal of Approval **1** In the case of application for renewal of approval, the manufacturer is to submit to the Society the appropriate application form (**Form 7-8**) accompanied with a copy of the approval certificate previously issued. The changes in particulars of the approved computer based system, quality system of manufacturer, etc., if any, are to be described in the application. **2** When the particulars of the approved computer based system, quality system of manufacturer, etc. remain unchanged, the Society approves the renewal of approval and issues a new approval certificate. The manufacturer who received the new approval certificate is to return the existing	**8.5.3 Renewal of Approval** **1** In the case of application for renewal of approval, the manufacturer is to submit to the Society the appropriate application form (**Form 7-8**) accompanied with a copy of the certificate previously issued. The changes in particulars of the approved computer based system, quality system of manufacturer, etc., if any, are to be described in the application. **2** When the particulars of the approved computer based system, quality system of manufacturer, etc. remain unchanged, the Society approves the renewal of approval and issues a new certificate. The manufacturer who received the new certificate is to return the existing certificate to the	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
approval certificate to the Society as soon as possible.	Society as soon as possible.	
8.6 Changes in Particulars of Approved Computer Based System, Quality System of Manufacturer, etc.	**8.6 Changes in Particulars of Approved Computer Based System, Quality System of Manufacturer, etc.**	
8.6.1 Changes in Particulars of Approved Computer Based System, Quality System of Manufacturer, etc.	**8.6.1 Changes in Particulars of Approved Computer Based System, Quality System of Manufacturer, etc.**	
1 In cases where the particulars of the approved computer based system, quality system of manufacturer, etc. are intended to be changed, the manufacturer is to submit to the Society the appropriate application form for changes (**Form 7-8**) accompanied with the following documents. (1) explanatory notes for changes , (2) necessary drawings and data , and (3) a copy of the approval certificate previously issued.	**1** In cases where the particulars of the approved computer based system, quality system of manufacturer, etc. are intended to be changed, the manufacturer is to submit to the Society the appropriate application form for changes (**Form 7-8**) accompanied with the following documents. (1) explanatory notes for changes (three copies), (2) necessary drawings and data (three copies each), and (3) a copy of the certificate previously issued.	To delete the specification of the number of copies due to digitization
3 When confirmation tests are carried out, the manufacturer is to produce a report of the test and is to submit it to the Society upon receiving confirmation from the Society's surveyor.	**3** When confirmation tests are carried out, the manufacturer is to produce a report of the test and is to submit three copies to the Society upon receiving confirmation from the Society's surveyor.	To delete the specification of the number of copies due to digitization Terminology alignment
4 When the results of the examination for documents and the confirmation test specified in **-1** to **-3** are confirmed to be satisfactory, the Society reissues the approval certificate with contents duly revised. The manufacturer who received the new approval certificate is to return the existing certificate to the Society as soon as possible.	**4** When the results of the examination for documents and the confirmation test specified in **-1** to **-3** are confirmed to be satisfactory, the Society reissues the certificate with contents duly revised. The manufacturer who received the new certificate is to return the existing approval certificate to the Society as soon as possible.	Terminology alignment
5 In the case specified in **-4**, the validity of the approval certificate is not changed in principle.	**5** In the case specified in **-4**, the validity of the certificate is not changed in principle.	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
8.7 Revocation of Approval **8.7.1 Revocation of Approval** **1** In cases where any of the following **(1)** to **(5)** is applicable, the Society may revoke approval based on the requirements in this chapter. In such cases, the Society is to notify the manufacturer of the revocation. (1) Where the result of the confirmation tests were found unsatisfactory. (2) Where the valid term of the approval certificate has expired. (3) Where the confirmation test was not carried out without any unavoidable reason. (4) Where withdrawal of the approval has been offered by the manufacturer. (5) Where the Society judged the approved computer based system to be unsuitable in the light of the service records of the shipboard automation equipment. **2** The manufacturer who received a notice of revocation of approval is to return the approval certificate of the relevant computer based system to the Society immediately.	**8.7 Revocation of Approval** **8.7.1 Revocation of Approval** **1** In cases where any of the following **(1)** to **(5)** is applicable, the Society may revoke approval based on the requirements in this chapter. In such cases, the Society is to notify the manufacturer of the revocation. (1) Where the result of the confirmation tests were found unsatisfactory. (2) Where the valid term of the certificate has expired. (3) Where the confirmation test was not carried out without any unavoidable reason. (4) Where withdrawal of the approval has been offered by the manufacturer. (5) Where the Society judged the approved computer based system to be unsuitable in the light of the service records of the shipboard automation equipment. **2** The manufacturer who received a notice of revocation of approval is to return the certificate of the relevant computer based system to the Society immediately.	Terminology alignment
8.8 Markings **8.8.1 Markings** Manufacturers of the type approved computer based systems are, in principle, to mark their products before shipment for identification of approved equipment; in	**8.8 Markings** **8.8.1 Markings** Manufacturers of the approved computer based systems are, in principle, to mark their products before shipment for identification of approved equipment; in	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
addition, at least the following items to be marked at a suitable place: ((1) to (5) are omitted.)	addition, at least the following items to be marked at a suitable place: ((1) to (5) are omitted.)	
Chapter 9 TYPE APPROVAL FOR ACCUMULATOR BATTERY SYSTEMS	**Chapter 9 APPROVAL OF USE FOR ACCUMULATOR BATTERY SYSTEMS**	
9.2 Application Procedures	**9.2 Application Procedures**	
9.2.1 Application Procedures **1** Manufacturers (applicants) of accumulator battery systems intending to apply the requirements in this chapter are to submit an appropriate application form (**Form 7-9**) accompanied with the drawings and documents referred to in **1.1.3-2, Annex 2.11.1-2, Part H of the Rules for the Survey and Construction of Steel Ships** to the Society.	**9.2.1 Application Procedures** **1** Manufacturers (applicants) of accumulator battery systems intending to apply the requirements in this chapter are to submit an appropriate application form (**Form 7-9**) accompanied with three copies each of the drawings and documents referred to in **1.1.3-2, Annex 2.11.1-2, Part H of the Rules for the Survey and Construction of Steel Ships** to the Society.	To delete the specification of the number of copies due to digitization
2 In addition to **-1** above, the following are to be submitted. ((1) to (4) are omitted.)	**2** In addition to **-1** above, three copies of each of the following ((1) to (4) are omitted.)	To delete the specification of the number of copies due to digitization
9.3 Tests	**9.3 Tests**	
9.3.4 Test Records After completion of tests, manufacturers are to prepare test reports, have such reports confirmed by Society	**9.3.4 Test Records** After completion of tests, manufacturers are to prepare test reports, have such reports confirmed by Society	To delete the specification of the number of copies due to digitization

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
surveyors, and then submit the confirmed reports to the Society for approval.	surveyors, and then submit three copies of the confirmed reports to the Society for approval.	
9.4 Type Approval as Automatic Devices and Equipment	**9.4 Use of Approval as Automatic Devices and Equipment**	Terminology alignment
9.4.1 Type Approval as Automatic Devices and Equipment Accumulator battery systems are to receive type approval based on **Chapter 1**. However, in tests according to **1.3.1**, it is acceptable to use only those components (e.g. battery packs) of accumulator battery systems installed on board that have the minimum functions required for verification of tests.	**9.4.1 Use of Approval as Automatic Devices and Equipment** Accumulator battery systems are to receive use of approval based on **Chapter 1**. However, in tests according to **1.3.1**, it is acceptable to use only those components (e.g. battery packs) of accumulator battery systems installed on board that have the minimum functions required for verification of tests	Terminology alignment
9.5 Approval	**9.5 Approval**	
9.5.1 Certificates When the results of the tests specified in **9.3.1** and **9.3.2** are confirmed to be appropriate and accumulator battery systems comply with **9.4**, the Society is to approve the accumulator battery system (hereinafter referred to as "approved equipment") and issue the relevant approval certificate which specifies the approval number, date of approval, type, and model.	**9.5.1 Certificates** When the results of the tests specified in **9.3.1** and **9.3.2** are confirmed to be appropriate and accumulator battery systems comply with **9.4**, the Society is to approve the accumulator battery system (hereinafter referred to as "approved equipment") and issue the relevant approval certificate.	Change in description
9.5.2 Validity The certificates specified in **9.5.1** are valid for 5 *years*	**9.5.2 Validity** The certificates specified in **9.5.1** are valid until a date	Change in description

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
from their date of approval. However, when approval is renewed in accordance with **9.5.3**, the new certificate is to be valid for 5 *years* from the next day after the expiry date of the previous validity.	not exceeding 5 *years* from their date of issue. However, when approval is renewed in accordance with **9.5.3**, the new certificate is to be valid until a date not exceeding 5 *years* from the date of expiry of the previously issued certificate.	
9.5.3 Renewal **1** Manufacturers applying for renewal of approval to submit the appropriate application form (**Form 7-9**) accompanied with copies of previously issued approval certificates to the Society review. Furthermore, changes in accumulator battery system specifications, if any, are to be described on the application forms.	**9.5.3 Renewal** **1** Manufacturers applying for renewal of approval to submit the appropriate application form (**Form 7-9**) accompanied with copies of previously issued certificates to the Society review. Furthermore, changes in accumulator battery system specifications, if any, are to be described on the application forms.	Terminology alignment
2 In cases where approved equipment specifications remain unchanged, the Society is to grant the renewal of approval and issue a new approval certificate. Manufacturers who receive new approval certificates are to return previously issued approval certificates to the Society as soon as possible.	**2** In cases where approved equipment specifications remain unchanged, the Society is to grant the renewal of approval and issue a new certificate. Manufacturers who receive new certificates are to return previously issued certificates to the Society as soon as possible.	Terminology alignment
9.6 Changes in Particulars, etc. of Approved Equipment	**9.6 Changes in Particulars, etc. of Approved Equipment**	
9.6.1 Changes in Particulars, etc. of Approved Equipment **1** In cases where the particulars of approved equipment, or the materials, construction, dimensions, etc. of major components of such approved equipment are intended to be changed, manufacturers are to submit the appropriate application form for changes (**Form 7-9**) accompanied with the following drawings and documents to the Society for approval.	**9.6.1 Changes in Particulars, etc. of Approved Equipment** **1** In cases where the particulars of approved equipment, or the materials, construction, dimensions, etc. of major components of such approved equipment are intended to be changed, manufacturers are to submit the appropriate application form for changes (**Form 7-9**) accompanied with the following drawings and documents to the Society for approval.	To delete the specification of the number of copies due to digitization

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Amended	Original	Remarks
(1) Explanatory notes for changes (2) Necessary drawings and documents (3) Copies of previously issued certificates	(1) Explanatory notes for changes (three copies) (2) Necessary drawings and documents (three copies each) (3) Copies of previously issued certificates	
3 When confirmation tests are carried out, manufacturers are to prepare test reports, have such reports confirmed by Society surveyors, and then to submit the confirmed reports to the Society for approval.	**3** When confirmation tests are carried out, manufacturers are to prepare test reports, have such reports confirmed by Society surveyors, and then to submit three copies of the confirmed reports to the Society for approval.	To delete the specification of the number of copies due to digitization
4 When the results of examinations of submitted drawings and documents, and the confirmation tests specified in **-1** to **-3** above are determined to be satisfactory, the Society is to reissue approval certificates with their contents duly revised. Manufacturers who receive revised approval certificates are to return previously issued approval certificates to the Society as soon as possible.	**4** When the results of examinations of submitted drawings and documents, and the confirmation tests specified in **-1** to **-3** above are determined to be satisfactory, the Society is to reissue certificates with their contents duly revised. Manufacturers who receive revised certificates are to return previously issued certificates to the Society as soon as possible.	Terminology alignment
5 In the case of **-4** above, the validity of approval certificates does not change in principle.	**5** In the case of **-4** above, the validity of certificates does not change in principle.	
9.7 Revocation of Approval	**9.7 Revocation of Approval**	
9.7.1 Revocation of Approval	**9.7.1 Revocation of Approval**	
1 In cases where any of the following **(1)** to **(5)** is applicable, the Society may revoke approval based on this chapter. In such cases, the Society is to notify manufacturers of such revocation.	**1** In cases where any of the following **(1)** to **(5)** is applicable, the Society may revoke approval based on this chapter. In such cases, the Society is to notify manufacturers of such revocation.	Terminology alignment
(1) In cases where the results of confirmation tests were found unsatisfactory.	(1) In cases where the results of confirmation tests were found unsatisfactory.	
(2) In cases where the valid terms of approval certificates have expired.	(2) In cases where the valid terms of certificates have expired.	
(3) In cases where confirmation tests were not carried out	(3) In cases where confirmation tests were not carried out	

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
without a valid reason. (4) In cases where withdrawal of approval has been requested by manufacturers. (5) In cases where the Society judges approved equipment to be unsuitable based on the equipment service records.	without a valid reason. (4) In cases where withdrawal of approval has been requested by manufacturers. (5) In cases where the Society judges approved equipment to be unsuitable based on the equipment service records.	
Chapter 10 TYPE APPROVAL OF SYSTEMS AND EQUIPMENT WITH IMPROVED CYBER RESILIENCE	**Chapter 10 APPROVAL OF USE OF SYSTEMS AND EQUIPMENT WITH IMPROVED CYBER RESILIENCE**	
10.1 General	**10.1 General**	
10.1.1 Scope **2** Computer-based systems subjected to **Chapter 4, Part X of the Rules for the Survey and Construction of Steel Ships** are to be subjected to the factory acceptance test specified in **10.3**. However, for computer-based systems which have already received type approval from the Society, plans and documents which obtained at the time of the type approval may be acceptable.	**10.1.1 Scope** **2** Computer-based systems subjected to **Chapter 4, Part X of the Rules for the Survey and Construction of Steel Ships** are to be subjected to the factory acceptance test specified in **10.3**. However, for computer-based systems which have already received approval of use from the Society, plans and documents which obtained at the time of the approval of use may be acceptable.	Terminology alignment
10.2 Application	**10.2 Application**	
10.2.1 Application Forms The manufacturer who makes application for type	**10.2.1 Application Forms** The manufacturer who makes an application for	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
approval of the computer based system is to submit the appropriate application form (*Form 7-10*) filled in with necessary data and information to the Society.	approval of use of the computer based system is to submit the appropriate application form (*Form 7-10*) filled in with necessary data and information to the Society.	To delete the specification of the number of copies due to digitization
10.2.2 Documents to be Submitted **1** The following documents are to be submitted to the Society with the application form specified in **10.2.1**.	**10.2.2 Documents to be Submitted** **1** Three copies each of the following documents are to be submitted to the Society with the application form specified in **10.2.1**.	To delete the specification of the number of copies due to digitization
((1) and (2) are omitted.)	((1) and (2) are omitted.)	
10.3 Factory Acceptance Test	**10.3 Factory Acceptance Test**	Terminology alignment
The objective of factory acceptance test is to demonstrate by testing and/or analytic evaluation that the computer-based system complies with applicable requirements in **Chapter 4, Part X of the Rules for the Survey and Construction of Steel Ships**. The survey and factory acceptance test is to be carried out at the supplier's premises or at other works having the adequate apparatus for testing and inspection. After completed plan approval and survey/ factory acceptance test, the Society will issue a System approval certificate that is to accompany the computer-based system upon delivery to the system integrator.	The objective of factory acceptance test is to demonstrate by testing and/or analytic evaluation that the computer-based system complies with applicable requirements in **Chapter 4, Part X of the Rules for the Survey and Construction of Steel Ships**. The survey and factory acceptance test is to be carried out at the supplier's premises or at other works having the adequate apparatus for testing and inspection. After completed plan approval and survey/ factory acceptance test, the Society will issue a System certificate that is to accompany the computer-based system upon delivery to the system integrator.	
10.4 Approval	**10.4 Approval**	
10.4.1 Certificate When the results of the examinations of submitted drawings and data and the tests specified in **10.2** and **10.3** are	**10.4.1 Certificate** When the results of the examinations of submitted drawings and data and the tests specified in **10.2** and **10.3** are	Change in description

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Amended	Original	Remarks
confirmed appropriate, the Society approves the computer based system (hereinafter referred to as "approved computer based system") and issues the relevant approval certificate specifying the approval number, date and conditions, etc.	confirmed appropriate, the Society approves the computer based system (hereinafter referred to as "approved computer based system") and issues the relevant approval certificate.	
10.4.2 Validity of Approval The approval certificate specified in **10.4.1** is to be valid until a date not exceeding 5 *years* from its date of issue. However, when the approval is renewed in accordance with **10.4.3**, the new approval certificate is to be valid until a date not exceeding 5 *years* from the date of expiry of the existing approval certificate.	**10.4.2 Validity of Approval** The certificate specified in **10.4.1** is to be valid until a date not exceeding 5 *years* from its date of issue. However, when the approval is renewed in accordance with **10.4.3**, the new certificate is to be valid until a date not exceeding 5 *years* from the date of expiry of the existing certificate.	Change in description
10.4.3 Renewal of Approval **1** In the case of application for renewal of approval, the manufacturer is to submit to the Society the appropriate application form (*Form 7-10*) accompanied with a copy of the approval certificate previously issued. The changes in particulars of the approved computer based system, quality system of manufacturer, etc., if any, are to be described in the application. **2** When the particulars of the approved computer based system, quality system of manufacturer, etc. remain unchanged, the Society approves the renewal of approval and issues a new approval certificate. The manufacturer who received the new approval certificate is to return the existing approval certificate to the Society as soon as possible.	**10.4.3 Renewal of Approval** **1** In the case of application for renewal of approval, the manufacturer is to submit to the Society the appropriate application form (*Form 7-10*) accompanied with a copy of the certificate previously issued. The changes in particulars of the approved computer based system, quality system of manufacturer, etc., if any, are to be described in the application. **2** When the particulars of the approved computer based system, quality system of manufacturer, etc. remain unchanged, the Society approves the renewal of approval and issues a new certificate. The manufacturer who received the new certificate is to return the existing certificate to the Society as soon as possible.	Change in description

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Amended	Original	Remarks
10.5 Changes in Particulars of Approved Computer Based System, Quality System of Manufacturer, etc.	**10.5 Changes in Particulars of Approved Computer Based System, Quality System of Manufacturer, etc.**	
10.5.1 Changes in Particulars of Approved Computer Based System, Quality System of Manufacturer, etc.	**10.5.1 Changes in Particulars of Approved Computer Based System, Quality System of Manufacturer, etc.**	
1 In cases where the particulars of the approved computer based system, quality system of manufacturer, etc. are intended to be changed, the manufacturer is to submit to the Society the appropriate application form for changes (*Form 7-10*) accompanied with the following documents. (1) explanatory notes for changes, (2) necessary drawings and data, and (3) copy of the approval certificate previously issued.	**1** In cases where the particulars of the approved computer based system, quality system of manufacturer, etc. are intended to be changed, the manufacturer is to submit to the Society the appropriate application form for changes (*Form 7-10*) accompanied with the following documents. (1) explanatory notes for changes (three copies), (2) necessary drawings and data (three copies each), and (3) a copy of the certificate previously issued.	To delete the specification of the number of copies due to digitization
3 When confirmation tests are carried out, the manufacturer is to produce a report of the test and is to submit it to the Society upon receiving confirmation from the Society's surveyor.	**3** When confirmation tests are carried out, the manufacturer is to produce a report of the test and is to submit three copies to the Society upon receiving confirmation from the Society's surveyor.	To delete the specification of the number of copies due to digitization
4 When the results of the examination for documents and the confirmation test specified in **-1** to **-3** are confirmed to be satisfactory, the Society reissues the certificate with contents duly revised. The manufacturer who received the new approval certificate is to return the existing certificate to the Society as soon as possible.	**4** When the results of the examination for documents and the confirmation test specified in **-1** to **-3** are confirmed to be satisfactory, the Society reissues the certificate with contents duly revised. The manufacturer who received the new certificate is to return the existing certificate to the Society as soon as possible.	To delete the specification of the number of copies due to digitization
5 In the case specified in **-4**, the validity of the approval certificate is not changed in principle.	**5** In the case specified in **-4**, the validity of the certificate is not changed in principle.	Terminology alignment

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Amended	Original	Remarks
10.6 Revocation of Approval	**10.6 Revocation of Approval**	
10.6.1 Revocation of Approval **1** In cases where any of the following **(1)** to **(5)** is applicable, the Society may revoke approval based on the requirements in this chapter. In such cases, the Society is to notify the manufacturer of the revocation. (1) Where the result of the confirmation tests were found unsatisfactory. (2) Where the valid term of the approval certificate has expired. (3) Where the confirmation test was not carried out without any unavoidable reason. (4) Where withdrawal of the approval has been offered by the manufacturer. (5) Where the Society judged the approved computer based system to be unsuitable in the light of the service records of the shipboard automation equipment.	**10.6.1 Revocation of Approval** **1** In cases where any of the following **(1)** to **(5)** is applicable, the Society may revoke approval based on the requirements in this chapter. In such cases, the Society is to notify the manufacturer of the revocation. (1) Where the result of the confirmation tests were found unsatisfactory. (2) Where the valid term of the certificate has expired. (3) Where the confirmation test was not carried out without any unavoidable reason. (4) Where withdrawal of the approval has been offered by the manufacturer. (5) Where the Society judged the approved computer based system to be unsuitable in the light of the service records of the shipboard automation equipment.	Terminology alignment
2 The manufacturer who received a notice of revocation of approval is to return the approval certificate of the relevant computer based system to the Society immediately.	**2** The manufacturer who received a notice of revocation of approval is to return the certificate of the relevant computer based system to the Society immediately.	Terminology alignment
10.7 Markings	**10.7 Markings**	
10.7.1 Markings Manufacturers of the type approved computer based systems are, in principle, to mark their products before shipment for identification of approved equipment; in	**10.7.1 Markings** Manufacturers of the approved computer based systems are, in principle, to mark their products before shipment for identification of approved equipment; in	Terminology alignment

Amended	Original	Remarks
addition, at least the following items to be marked at a suitable place: (1) Manufacturer name or equivalent (2) Type No. or symbol (3) Serial No. and date of manufacture (4) Particulars or ratings (5) Approval number	addition, at least the following items to be marked at a suitable place: (1) Manufacturer name or equivalent (2) Type No. or symbol (3) Serial No. and date of manufacture (4) Particulars or ratings (5) Approval number	
Part 8 TYPE APPROVAL OF ELECTRICAL EQUIPMENT AND CABLES	**Part 8 TYPE TESTS OF ELECTRICAL EQUIPMENT AND CABLES**	Terminology alignment
Chapter 1 GENERAL	**Chapter 1 GENERAL**	
1.1 General	**1.1 General**	
1.1.1 Scope The requirements in this part apply to tests and inspection for the type approval of electrical equipment and cables specified in **1.1.3** in accordance with the requirements of **1.2.1-4, Part H of the Rules for the Survey and Construction of Steel Ships** (hereinafter referred to as "the Rules").	**1.1.1 Scope** The requirements in this part apply to tests and inspection for the type test of electrical equipment and cables specified in **1.1.3** in accordance with the requirements of **1.2.1-4, Part H of the Rules for the Survey and Construction of Steel Ships** (hereinafter referred to as "the Rules").	Terminology alignment
1.1.2 Definitions The type approved products are those certified that they have passed through the type approval tests specified in	**1.1.2 Definitions** The type tested products are those certified that they have passed through the type tests specified in **Chapter 2** to	Terminology alignment

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Amended	Original	Remarks
Chapter 2 to **7**. **1.1.3 Articles** Electrical equipment cables subject to the type approval are to be as follows. (1) Fuses Cartridge type fuses (renewable and non-renewable) and plug type fuses. (2) Circuit breakers Low-voltage breakers, air circuit breakers and molded case circuit breakers (including molded case circuit breakers with fuses and molded case circuit breakers used for the protection of induction motors simultaneously. Hereinafter, these are referred to as "molded case circuit breakers" unless otherwise specified.). (3) Electromagnetic contactors Electromagnetic contactors used for motors and other loads. (4) Explosion protected electrical equipment Electrical equipment specified in **2.16.2, Part H of the Rules for the Survey and Construction of Steel Ships** used in the spaces on board flammable or explosive gas or vapour (hereinafter referred to as explosive gas) exists or may exist in the atmosphere. (5) Cables (a) Cables used power circuits, lighting circuits, supply and distribution circuits of interior-communication, control circuits, etc. (b) Flexible cords used for power supply and distribution circuits.	**7**. **1.1.3 Articles** Electrical equipment cables subject to the type test are to be as follows. (1) Fuses Cartridge type fuses (renewable and non-renewable) and plug type fuses. (2) Circuit breakers Low-voltage breakers, air circuit breakers and molded case circuit breakers (including molded case circuit breakers with fuses and molded case circuit breakers used for the protection of induction motors simultaneously. Hereinafter, these are referred to as "molded case circuit breakers" unless otherwise specified.). (3) Electromagnetic contactors Electromagnetic contactors used for motors and other loads. (4) Explosion protected electrical equipment Electrical equipment specified in **2.16.2, Part H of the Rules for the Survey and Construction of Steel Ships** used in the spaces on board flammable or explosive gas or vapour (hereinafter referred to as explosive gas) exists or may exist in the atmosphere. (5) Cables (a) Cables used power circuits, lighting circuits, supply and distribution circuits of interior-communication, control circuits, etc. (b) Flexible cords used for power supply and distribution circuits.	Terminology alignment

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Amended	Original	Remarks
(c) 150 *V* multicore *PVC* insulated cables for electronic equipment. (6) Semiconductor converters for power Semiconductor converters for power for which type approval are required by relevant requirements	(c) 150 *V* multicore *PVC* insulated cables for electronic equipment. (6) Semiconductor converters for power Semiconductor converters for power for which type tests are required by relevant requirements	
1.2 Approval Application	**1.2 Application Procedures**	Change in description
1.2.1 Approval Application Form		Change in description
1 The manufacturer who intends to obtain the type approval by the Society is to submit the appropriate application form (**Form 8-1**) stating names, types, ratings, specifications, service applications, applicable standards, etc. of the products concerned together with drawings and documents necessary for examinations and test plans. **2** In case where items of the approval tests are intended to be partially of fully omitted appropriate certificate or technical records concerned are to be submitted to the Society as well. In addition, the application is, in principle, to be prepared for each type.	The application procedures are to be as follows: (1) The manufacturer who intends to obtain the type tests by the Society is to submit the appropriate application form (**Form 8-1**) stating names, types, ratings, specifications, service applications, applicable standards, etc. of the products concerned together with three copies each of drawings and documents necessary for examinations and three copies of test plans. In case where items of the type tests are intended to be partially of fully omitted appropriate certificate or technical records concerned are to be submitted to the Society as well. In addition, the application is, in principle, to be prepared for each type.	Terminology alignment To delete the specification of the number of copies due to digitization
1.2.2 Documents **1** The drawings and documents necessary for examinations listed in the following (1) to (7) are to be submitted together with the application form specified in **1.2.1**. (1) Specifications (2) Drawings and documents necessary for examinations	**(Newly added)** (Newly added)	Relocation of the documents specified in 1.2.1-1 Addition of requirements related to quality control

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Amended	Original	Remarks
(3) Approval test plan (the place of test and scheduled date of test are to be entered) (4) Data on the summary of test facilities (5) Data on outline of manufacturing plant (6) Information on the manufacturing and quality control standards (7) Records of manufacture and delivery (if any) **2** As for explosion protected electrical equipment, drawings and documents required to be submitted are as follows. Items **(4)**, **(5)** and **(6)** are, however, required for intrinsically safe type electrical equipment only. (1) Drawings of detailed sectional assembly and arrangement of components (2) List of electrical parts and materials (3) Functional descriptions of explosion-protected constructions (4) Electric circuit diagrams (5) Sectional assembly drawings of transformers with earthed screens and component parts (relays, photo-couplers, etc.) used for maintenance of intrinsic safety (6) Construction drawings and circuit diagrams of safety barriers.	(2) As for explosion protected electrical equipment, drawings and documents required to be submitted are as follows. Items **(d)**, **(e)** and **(f)** are, however, required for intrinsically safe type electrical equipment only. (a) Drawings of detailed sectional assembly and arrangement of components (b) List of electrical parts and materials (c) Functional descriptions of explosion-protected constructions (d) Electric circuit diagrams (e) Sectional assembly drawings of transformers with earthed screens and component parts (relays, photo-couplers, etc.) used for maintenance of intrinsic safety (f) Construction drawings and circuit diagrams of safety barriers.	
1.3 Preliminary Examination	**(Newly added)**	
1.3.1 Test Plan Approval The Society examines the test plan for approval submitted in accordance with **1.2.2(3)**, and where deemed appropriate, the plan is approved and returned to the		

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Amended	Original	Remarks
manufacturer. In cases where deemed appropriate after reviewing the documents submitted according to **1.2.2**, a part of the approval test may be exempted.		
1.3.2 Confirmation of Manufacturing and Quality Control Procedures The Society may carry out surveys of the actual situation of manufacturing plants on the basis of the data submitted according to **1.2.2-1(4)** to **(7)** as deemed necessary. In such cases, manufacturers are to provide the necessary information related to this survey.		Addition of requirements related to quality control
1.4 Approval Tests	**1.3 Type Tests**	
1.4.1 Test Place (Omitted)	**1.3.1 Test Place** (Omitted)	
1.4.2 Approval Tests Detailed requirements of tests are to be in accordance with **Chapters 2** to **7** according to the types of equipment. In case where the Society deems necessary, however, additional tests may be requested.	**1.3.2 Type Tests** Detailed requirements of type tests are to be in accordance with **Chapters 2** to **7** according to the types of equipment. In case where the Society deems necessary, however, additional tests may be requested.	Terminology alignment
1.5 Approval Certificate	**1.4 Certificate**	
1.5.1 Submission of Test Records The manufacturer (applicant) is to submit the test records to the Society (Branch Office) immediately after	**1.4.1 Submission of Test Records** The manufacturer (applicant) is to submit three copies each of the test records to the Society (Branch Office)	To delete the specification of the number of copies due to digitization

Amended	Original	Remarks
completion of tests.	immediately after completion of tests.	
1.5.2 Issuance of Approval Certificate The Society issues certificates which include the approval number, approval date, approval items etc. for the tested products, where the results of the tests are deemed satisfactory. In this case the test records submitted in accordance with **1.5.1** is returned to the applicant (through the related local office) after putting the Society's stamp.	**1.4.2 Issuance of Certificate** The Society issues certificates for the type tested products, where the results of the type tests are deemed satisfactory. In this case, one copy of the test records submitted in accordance with **1.4.1** is returned to the applicant (through the related local office) after putting the Society's stamp.	Terminology alignment
1.5.3 Term of Validity The term of validity is five *years* from the date of approval. In cases when the renewal of approval is carried out in accordance with **1.4.4**, the valid term will be 5 *years* from the next day after the expiry date of the previous validity.	**1.4.3 Term of Validity** The term of validity is five *years* from the date of approval.	Change in description
1.5.4 Renewal of Approval	**1.4.4 Renewal of Validity**	
1 Where the renewal of a certificate is intended for each approved product, the manufacturer is to undergo the periodical investigation (*see* **1.6**) after submitting the appropriate application form (**Form 8-1**) to the Society (Branch Office).	**1** Where the validity of the certificate is intended to be renewed, the manufacturer is to undergo the periodical investigation (*see* **1.5**) after submitting the appropriate application form (**Form 8-1**) to the Society (Branch Office).	Change in description
2 Where the periodical investigation is postponed due to unavoidable reasons, the manufacturer is to submit the appropriate application form (**Form 8-1P**) to the Society and is to take the steps required by the Society.	**2** Where the periodical investigation is postponed due to unavoidable reasons, the manufacturer is to submit the appropriate application form (**Form 8-1P**) to the Society and is to take the steps required by the Society.	To delete the specification of the number of copies due to digitization
3 Where the periodical investigation has been passed, the Society will re-issue the new approval certificate. Manufacturers are to return the old approval certificate to the Society as soon as possible after receiving the new approval certificate and the term of validity of the old one expires.	**3** Where the periodical investigation has been passed, the Society will re-issue the new certificate, the term of validity of which is five *years* from the date of expiration for the existing certificate. Manufacturers are to return the old "Certificate of Approval" to the Society as soon as possible after receiving the new certificate and the term of validity of	Change in description

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	the old one expires.	
4 When the validity of the approval certificate is not intended to be renewed, the manufacturer is to notify the Society (Branch Office) in writing and immediately return the approval certificates of the products concerned.	**4** When the validity of the certificate is not intended to be renewed, the manufacturer is to notify the Society (Branch Office) in writing and immediately return the certificates of the products concerned.	Change in description
1.6 Periodical Investigation	**1.5 Periodical Investigation**	
1.6.1 Place of Investigation (Omitted)	**1.5.1 Place of Investigation** (Omitted)	
1.6.2 Tests The periodical investigation is to be in accordance with the requirements specified in **1.3** and **1.4**. The following test items, however, may be omitted. ((1) to (5) are omitted.)	**1.5.2 Tests** Test items and the number of test samples for the periodical investigation are to be in accordance with the requirements specified in **1.3**. The following test items, however, may be omitted. ((1) to (5) are omitted.)	Change in description
1.7 Change of Materials and Constructions, etc.	**1.6 Change of Materials and Constructions, etc.**	Terminology alignment
1.7.1 Application for Change Where the particulars, materials of essential parts, construction, dimensions, etc. of the type approved products are intended to change, the manufacturer is to submit the appropriate application form for the change (**Form 8-1**) and explanatory notes of the change (writing in contrasted form of new and old ones as far as possible) and necessary drawings to the Society. Verification tests may be carried out	**1.6.1 Application for Change** Where the particulars, materials of essential parts, construction, dimensions, etc. of the type tested products are intended to change, the manufacturer is to submit the appropriate application form for the change (**Form 8-1**) and three copies each of explanatory notes of the change (writing in contrasted form of new and old ones as far as possible) and necessary drawings to the Society. Verification tests may be	Terminology alignment To delete the specification of the number of copies due to digitization

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Amended	Original	Remarks
where deemed necessary in connection with the changes.	carried out where deemed necessary in connection with the changes.	
1.8 Verification Test	**1.7 Verification Test**	
1.8.1 Execution of Test **1** In case of applying to any of the followings, the verification tests are to be carried out. The tests are, in principle, to be carried out at the manufacturer's works. (1) Where tests are carried out in accordance with **1.7.1**. (2) Where doubts occur in the construction, performance, etc. of the type approved products. (3) Where deemed necessary by the Society. **2** (Omitted)	**1.7.1 Execution of Test** **1** In case of applying to any of the followings, the verification tests are to be carried out. The tests are, in principle, to be carried out at the manufacturer's works. (1) Where tests are carried out in accordance with **1.6.1**. (2) Where doubts occur in the construction, performance, etc. of the type tested products. (3) Where deemed necessary by the Society. **2** (Omitted)	Terminology alignment
1.8.2 Submission of Approval Certificate and Test Record The manufacturer is to submit a copy of the existing approval certificates and the test records to the Society (Branch Office) immediately after completion of the verification test.	**1.7.2 Submission of Certificate and Test Record** The manufacturer is to submit a copy of the existing certificates and three copies each of the test records to the Society (Branch Office) immediately after completion of the verification test.	Terminology alignment
1.8.3 Renewal of Approval Certificate Where verification test records are considered appropriate the Society will issue the new approval certificates. In this case, the existing approval certificate is to be returned to the Society as soon as possible after receiving the new approval certificate.	**1.7.3 Renewal of Certificate** Where verification test records are considered appropriate the Society will issue the new certificates. In this case, the existing certificate is to be returned to the Society as soon as possible after receiving the new certificate.	Terminology alignment

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Amended	Original	Remarks
1.9 Revocation of Approval Certificate	**1.8 Revocation of Certificate**	Terminology alignment
1.9.1 Notice of Revocation Where the results of the periodical investigation or verification tests are found unsatisfactory or where the application for the periodical investigation is not made, the Society will notify the manufacturer of the revocation of the approval through the Branch Office.	**1.8.1 Notice of Revocation** Where the results of the periodical investigation or verification tests are found unsatisfactory or where the application for the periodical investigation is not made, the Society will notify the manufacturer of the revocation of the approval through the Branch Office.	Terminology alignment
1.9.2 Return of Approval Certificate The manufacturer who received the revocation specified in **1.9.1** is to immediately return the approval certificates concerned to the Society.	**1.8.2 Return of Certificate** The manufacturer who received the revocation specified in **1.8.1** is to immediately return the certificates concerned to the Society.	Terminology alignment
1.10 Treatment of Product after Success in Approval Test	**1.9 Treatment of Product after Success in Type Test**	Terminology alignment
1.10.1 Tests and Inspection of Individual Product (Omitted)	**1.9.1 Tests and Inspection of Individual Product** (Omitted)	
1.11 Markings	**1.10 Markings**	
1.11.1 Markings The marking of the type approved products are to be in accordance with the Rules and Application Standard (including the manufacturer's name or equivalent, type No. or code, manufacturing No., year, main particulars and ratings)	**1.10.1 Markings** The marking of the type tested products are to be in accordance with the Rules and Application Standard (including the manufacturer's name or equivalent, type No. or code, manufacturing No., year, main particulars and ratings)	Terminology alignment

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and in addition, the manufacturer is to mark appropriately to indicate the type approved product.	and in addition, the manufacturer is to mark appropriately to indicate the type tested product.	
Chapter 2 FUSES	**Chapter 2 FUSES**	
2.1 General	**2.1 General**	
2.1.1 Scope **1** The requirements in this chapter apply to the approval tests of fuses in accordance with the requirements in **Chapter 1**.	**2.1.1 Scope** **1** The requirements in this chapter apply to the type tests of fuses in accordance with the requirements in **Chapter 1**.	
2.2 Approval Tests	**2.2 Type Tests**	Terminology alignment
2.2.1 Approval Tests Detailed requirements of the approval test are to be in accordance with IEC 60269 (Low-voltage fuses) or a standard which is deemed appropriate by the Society, amended when necessary for ambient temperature.	**2.2.1 Type Tests** Detailed requirements of the type test are to be in accordance with IEC 60269 (Low-voltage fuses) or a standard which is deemed appropriate by the Society, amended when necessary for ambient temperature.	Terminology alignment

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Amended	Original	Remarks
Chapter 3 CIRCUIT-BREAKERS	**Chapter 3 CIRCUIT-BREAKERS**	
3.1 General	**3.1 General**	
3.1.1 Scope **1** The requirements in this chapter apply to the approval tests of circuit-breakers in accordance with the requirements in **Chapter 1**.	**3.1.1 Scope** **1** The requirements in this chapter apply to the type tests of circuit-breakers in accordance with the requirements in **Chapter 1**.	
3.2 Approval Tests	**3.2 Type Tests**	Terminology alignment
3.2.1 Approval Tests (Omitted)	**3.2.1 Type Tests** (Omitted)	Terminology alignment
Chapter 4 ELECTROMAGNETIC CONTACTORS	**Chapter 4 ELECTROMAGNETIC CONTACTORS**	
4.1 General	**4.1 General**	
4.1.1 Scope **1** The requirements in this chapter apply to the approval tests of electromagnetic contactors in accordance with the requirements in **Chapter 1**.	**4.1.1 Scope** **1** The requirements in this chapter apply to the type tests of electromagnetic contactors in accordance with the requirements in **Chapter 1.**	Terminology alignment

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Amended	Original	Remarks
4.2 Approval Tests	**4.2 Type Tests**	Terminology alignment
4.2.1 Approval Tests (Omitted)	**4.2.1 Type Tests** (Omitted)	
Chapter 5 EXPLOSION-PROTECTED ELECTRICAL EQUIPMENT	**Chapter 5 EXPLOSION-PROTECTED ELECTRICAL EQUIPMENT**	
5.1 General	**5.1 General**	
5.1.1 Scope **1** The requirements in this chapter apply to the approval tests of explosion-protected electrical equipment in accordance with the requirements in **Chapter 1**.	**5.1.1 Scope** **1** The requirements in this chapter apply to the type tests of explosion-protected electrical equipment in accordance with the requirements in **Chapter 1**.	Terminology alignment
5.2 Approval Tests	**5.2 Type Tests**	Terminology alignment
5.2.1 Approval Tests (Omitted)	**5.2.1 Type Tests** (Omitted)	Terminology alignment

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Amended	Original	Remarks
Chapter 6 CABLES	**Chapter 6 CABLES**	
6.1 General	**6.1 General**	
6.1.1 Scope **1** The requirements in this chapter apply to the approval tests of cables in accordance with the requirements in **Chapter 1**.	**6.1.1 Scope** **1** The requirements in this chapter apply to the type tests of cables in accordance with the requirements in **Chapter 1**.	Terminology alignment
6.2 Approval Tests	**6.2 Type Tests**	Terminology alignment
6.2.1 Approval Tests (Omitted)	**6.2.1 Type Tests** (Omitted)	Terminology alignment
Chapter 7 SEMICONDUCTOR CONVERTERS FOR POWER	**Chapter 7 SEMICONDUCTOR CONVERTERS FOR POWER**	
7.1 General	**7.1 General**	
7.1.1 Scope **1** The requirements in this chapter apply to the approval tests of semiconductor converters for power in accordance with the requirements in **Chapter 1**.	**7.1.1 Scope** **1** The requirements in this chapter apply to the type tests of semiconductor converters for power in accordance with the requirements in **Chapter 1**.	Terminology alignment

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Amended	Original	Remarks
7.2 Approval Tests	**7.2 Type Tests**	Terminology alignment
7.2.1 Approval Tests (Omitted)	**7.2.1 Type Tests** (Omitted)	
Annex 1.1 Approval Scheme for Small-scale Test Methods for Brittle Crack Arrest Steels	**Annex 1.1 Approval Scheme for Small-scale Test Methods for Brittle Crack Arrest Steels**	
1.1 Scope	**1.1 Scope**	
1.1.1 Scope **2** Unless otherwise specified in this annex, **Chapter 1, Part 1** is to be followed.	**1.1.1 Scope** **2** Unless otherwise specified in this annex, **Chapter 1, Part I** is to be followed.	Changes due to the reorganization of the "Guidance for the Approval"
1.3 Establishment of Small-scale Test Procedure Specifications	**1.3 Establishment of Small-scale Test Procedure Specifications**	
1.3.3 Testing Data **2** Brittle Crack Arrest Tests (1) Brittle crack arrest tests for test plates are to be carried out in accordance **1.4.2** and **1.4.3, Chapter 1, Part 2**. ((2) and (3) are omitted.)	**1.3.3 Testing Data** **2** Brittle Crack Arrest Tests (1) Brittle crack arrest tests for test plates are to be carried out in accordance **1.4.2** and **1.4.3, Chapter 1, Part 1**. ((2) and (3) are omitted.)	Changes due to the reorganization of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
1.4 Approval Tests	**1.4 Approval Tests**	
1.4.3 Type of tests **1** Brittle crack arrest tests (1) Brittle crack arrest tests are to be carried out in accordance with **1.4.2, Chapter 1, Part 2**. ((2) and (3) are omitted.)	**1.4.3 Type of tests** **1** Brittle crack arrest tests (1) Brittle crack arrest tests are to be carried out in accordance with **1.4.2, Chapter 1, Part 1**. ((2) and (3) are omitted.)	Changes due to the reorganization of the "Guidance for the Approval"
Annex 1.3 Schemes for Approval of Manufacturing Process for High Manganese Austenitic Steels	**Annex 1.3 Manufacturing Approval Schemes for High Manganese Austenitic Steels**	Terminology alignment
1.1 General	**1.1 General**	
1.1.1 Scope **1** In accordance **1.1.2, Part 2**, this annex applies to tests and inspections for the approval of manufacturing process for high manganese austenitic steels.	**1.1.1 Scope** **1** In accordance **1.1.2, Part 1**, this annex applies to tests and inspections for the manufacturing process approval for high manganese austenitic steels.	Terminology alignment
2 Scheme of the approval of the manufacturing process specified in this annex is for verifying manufacturer capability to provide satisfactory products stably under effective process and production controls.	**2** The manufacturing approval scheme specified in this annex is for verifying manufacturer capability to provide satisfactory products stably under effective process and production controls.	Terminology alignment

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
1.4 Approval Tests	**1.4 Approval Tests**	
1.4.3 Test Details **3** In the case of following **(1)** through **(3)**, the Society is to consider such content and may omit part or all of the approval tests. (1) Changes in the approval contents specified in **1.5.4, Part 2**. ((2) and (3) are omitted.)	**1.4.3 Test Details** **3** In the case of following **(1)** through **(3)**, the Society is to consider such content and may omit part or all of the approval tests. (1) Changes in the approval contents specified in **1.5.4, Part 1**. ((2) and (3) are omitted.)	Changes due to the reorganization of the "Guidance for the Approval"
1.5 Approval	**1.5 Approval**	
1.5.1 General Requirements regarding approval are to comply with **1.5, Part 2**.	**1.5.1 General** Requirements regarding approval are to comply with **1.5, Part 1**.	Changes due to the reorganization of the "Guidance for the Approval"
1.6 Treatment after Approval	**1.6 Treatment after Approval**	
1.6.1 General Requirements regarding treatment after approval are to comply with **1.6, Part 2**.	**1.6.1 General** Requirements regarding treatment after approval are to comply with **1.6, Part 1**.	Changes due to the reorganization of the "Guidance for the Approval"

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
Annex 4.1 Tests on Simulated Ballast Tank Condition	**Annex 4.1 Tests on Simulated Ballast Tank Condition**	
1.4 Test Report	**1.4 Test Report**	Changes due to the reorganization of the "Guidance for the Approval"
The test report is to include the following information: (1) Name of the manufacturer; (2) Date of tests; (3) Product name/identification of both paint and primer (if **4.1.1-2(2), Part 5**, including kind of shop primer); (4) Batch number; (5) Data of surface preparation on steel panels, including the following: (a) Surface treatment; (b) Water soluble salts limit; (c) Dust; and (d) Abrasive inclusions; (6) Application data of coating system, including the following: (a) Shop primed; (b) Number of coats; (c) Recoat interval*; (d) Dry film thickness (*DFT*) prior to testing*; (e) Thinner*; (f) Humidity*; (g) Air temperature*; and (h) Steel temperature; (Remark) * Both of actual specimen data and manufacturer's requirement/recommendation. (7) Test results according to **1.2**; and	The test report is to include the following information: (1) Name of the manufacturer; (2) Date of tests; (3) Product name/identification of both paint and primer (if **4.1.1-2(2), Part 4**, including kind of shop primer); (4) Batch number; (5) Data of surface preparation on steel panels, including the following: (a) Surface treatment; (b) Water soluble salts limit; (c) Dust; and (d) Abrasive inclusions; (6) Application data of coating system, including the following: (a) Shop primed; (b) Number of coats; (c) Recoat interval*; (d) Dry film thickness (*DFT*) prior to testing*; (e) Thinner*; (f) Humidity*; (g) Air temperature*; and (h) Steel temperature; (Remark) * Both of actual specimen data and manufacturer's requirement/recommendation. (7) Test results according to **1.2**; and	

Amended-Original Requirements Comparison Table
(Review of Guidance for the Approval of Materials and Equipment for Marine Use)

Amended	Original	Remarks
(8) Judgment according to **1.3**. **Annex 4.2 Condensation Chamber Test** **1.4 Test Report** The test report is to include the following information: ((1) and (2) are omitted.) (3) Product name/identification of both paint and primer (if **4.1.1-2(2), Part 5**, including kind of shop primer); ((4) to (8) are omitted.)	(8) Judgment according to **1.3**. **Annex 4.2 Condensation Chamber Test** **1.4 Test Report** The test report is to include the following information: ((1) and (2) are omitted.) (3) Product name/identification of both paint and primer (if **4.1.1-2(2), Part 4**, including kind of shop primer); ((4) to (8) are omitted.)	Changes due to the reorganization of the "Guidance for the Approval"
EFFECTIVE DATE AND APPLICATION **1.** The effective date of the amendments is 1 July 2026. **2.** Notwithstanding the amendments, the current requirements apply to Materials and Equipment for Marine Use for which the application for approval is submitted to the Society before the effective date.		