

Subject :

IMO conventions to enter into force in 2002
(Part 3)
(Refer to NK Technical Information No. 396)

NKTECHNICAL INFORMATION

No. : 406

Date : 18 June 2001

To All shipowners and shipbuilders concerned.

With regard to information given in NK Technical information No. 396, please note the following revisions for correction and clarification, and replace the text with this issue. (deletions are indicated with double strike lines and insertions are indicated with underlines)

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The following is a summary of the decisions made by IMO's Maritime Safety Committee (MSC) held from 27 November 2000 to 6 December 2000. These requirements are expected to enter into force on 1 July 2002, together with the requirements introduced by classNK Technical Information No. 283.

Further details regarding the implementation of these requirements by the Society will be provided in due course.

(Note: "New ships" given hereunder means ships commence their construction on or after the date of entry into force (1 July 2002) and "Existing ships" means ships would have completed keel lay prior to this date or would have delivered by the date.)

1 Amendments to the SOLAS Convention (Resolution MSC.99(73))

Applies to: Ships as described by each respective regulation. There are regulations which apply to existing ships

Entry into force: 1 July 2002

Summary:

- Chapter II-1 / Reg. 3-4 (Emergency towing arrangements on tankers)

~~For new tankers, the "rapid deployment" requirement will be imposed for either bow or aft arrangement. (Previously it is imposed to the aft arrangement only. By this amendment, it will be possible to make the bow arrangement as "paid deployment" instead of the aft)~~

"Emergency Towing Arrangements (ETA) are required to be of "rapid deployment" and to be located both at fore end and after end of the ship. Among them, the one located at aft is required to be of "pre-rigged" type. By the amendment made to this regulation, compliance to the "pre-rigged" type requirements can be made either by installing the at fore of the ship or after end of the ship.

- Chapter II-1 / Reg. 3-5 (New installation of materials containing asbestos)

New installation of materials which contain asbestos will be prohibited except for essential use,

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such as watertight joints and linings used for the circulation of fluids at high temperature or pressure.

- Chapter II-1 / Reg. 43.2.2 (Emergency source of electrical power in cargo ships)

Cargo pump rooms of new tankers are added to the list of places where emergency lighting is required to be provided for a period of 18 hours.

- Chapter II-2

The whole chapter has been revised in order to meet the following objectives:

(1) To code with the new technologies and ideas.

Part F of the chapter "Alternative design and arrangements" has been inserted to cope with new technologies and new designs.

(2) To reorganise existing requirements by functions

The existing chapter had been divided by types of ships. However, the revised chapter is divided by function, i.e., PREVENTION, SUPPRESSION, ESCAPE, OPERATIONAL REQUIREMENTS and SPECIAL REQUIREMENTS.

(3) To separate specific requirements for systems and requirement and re-organize as a mandatory code called the International Code for Fire Safety Systems (FSS Code)

Same as the LSA code, the code is made mandatory by the reference to the convention.

(4) To incorporate IMO interpretation of vague expressions

As a result of the incorporation, interpretations previously given in the "non-mandatory" guidelines are now made mandatory as they are now situated in the convention.

(5) To reflect new requirements

New requirements have been set force regarding installations/arrangements such as "Fixed Local Application Fire-fighting Systems for Machinery Spaces of Category A", "Emergency Escape Breathing Devices", "Fire Safety of Deep-fat Cooking Equipment", "Fire Protection of Cargo Pump rooms in tankers", "Isolation of Oil Fuel Piping for Multi-engine Installations" and "Training Manual/Fire Safety Operational Booklet".

(6) Other matters

(i) As a result of the complete re-organization of the chapter, there is no continuity regarding previous and new numbers of each respective regulations.

(ii) With regard to the structural requirements, the requirements to be applied to existing ships are limited, such as installation of emergency escape breathing devices, fixed local application fire-fighting systems for Machinery Spaces of Category A, and fire safety of cargo pump rooms in tankers. However, requirements regarding operation and maintenance, including requirements for preparing manuals, will be applicable to all ships, including existing ships. Existing ships are required to comply with the requirements by the first survey after the date of entry into force of the amendments.

- Chapter II-2 / Reg. 4.2.2.5.5. (Means of isolating the fuel supply to engines)

Consideration of the maximum peak pressure, ~~safety precaution for the connections~~ improving piping requirements for safety, means of isolating the fuel supply for the multi-engine installation supplied form the same fuel source by closing the fuel supply piping are required.

- Chapter II-2 / Reg. 4.5.10.1 (Protection of cargo pump-rooms in tankers)

Fitting of temperature sensing devices at bulkhead shaft glands, bearings and pump casings as well as their alarms, interlocking of lighting with ventilation, a system of continuous monitoring of the concentration of hydrocarbon gases, and bilge level monitoring devices are required in the cargo pump rooms. For existing ships, the requirements of ~~temperature sensing devices and bilge level monitoring devices~~ temperature sensing devices and a system for monitoring of the concentration of hydrocarbon gases as well as bilge level monitoring devices are to be complied with by the first scheduled dry-docking after 1 July 2002 but not later than 1 July 2005.

- Chapter II-2 / Reg. 10.5.6 (Fixed local application fire-fighting systems for machinery spaces of category A)

Although the guidelines for such system were circulated as MSC/Circ. 913, their incorporation in the convention makes the requirement mandatory. The requirement is to be applied to category A machinery spaces of the new passenger ships (500 gt and over) and new cargo ships (2,000 gt and over) as well as existing passenger ships (2,000 gt and over). ~~The existing ships are required to comply with by the first dry docking after 1 July 2002 but not later than 1 October 2005.~~ Existing passenger ships of 2,000 gt and above are required to comply with not later than 1 October 2005.

- Chapter II-2 / Reg. 10.6.3.1 (Fire protection of paint lockers)

Incorporation of the IMO interpretation of this item has made the requirements much more clearer. At present, there are flag States which accept portable fire-extinguishers for the purpose, however, as the system must be operable from the outside the protected space, it may be difficult to interpret the requirements such way under new regulation. In this sense, this is a substantial amendment to the requirement rather than interpretation.

- Chapter II-2 / Reg. 10.6.4 (Deep-fat cooking equipment)

Fire-fighting installations for deep-fat cooking equipment will be newly required. The requirements will be applicable to new ships. As for existing ships, the requirements are to be complied with when a new installation is placed onboard the ship after entry into force of the amendments.

- Chapter II-2 / Reg. 13.3.4/13.4.3 (Emergency escape breathing devices)

A device which will be used for emergency purpose lasting approximately 10 minutes is to be installed onboard both new and existing ships. For existing ships, the requirement is to be complied with by the first survey after 1 July 2002.

- Chapter II-2 / Reg. 17 (Alternative design and arrangements)

The purpose of this regulation is to provide a methodology for alternative design and arrangements for fire safety, which may be considered as equivalent.

- Chapter V

Same as Chapter II-2, the whole chapter V is revised. The objectives of the revision are to

allow flexibility for catching up with the technological development in the future, by incorporating the principle of "Functional requirements" of the ships which navigational equipment are to be installed. A summary of the amendments is given hereunder. It should be noted that some of the installation requirements will be applicable to existing ships, e.g., VDR, AIS, etc.

- Chapter V / Reg. 15 (Principles relating to bridge design, design and arrangement of navigational systems and equipment and bridge procedures)

In order to facilitate the tasks to be performed by the bridge team, the new idea "Principle" is incorporated.

- Chapter V / Reg. 17 (Electromagnetic compatibility)

All electrical and electronic equipment on the bridge or in the vicinity of the bridge of new ships is to be tested for electromagnetic compatibility. Portable electrical and electronic equipment shall not be operated on the bridge if it may affect the proper function of navigational systems and equipment.

- Chapter V / Reg. 19 & Reg. 20 (Shipborne navigational systems and equipment)

(New equipment required)

(1) VDR (Voyage Data Recorder)

A VDR is shipborne version of "black box" used for aircraft. It records conversations at the navigation bridge, VHF radio communication, speed, course and other information on the ship's condition for 12 hours. The application scheme is given hereunder:

(a) New ships

- i) Passenger ships engaged on international voyages
- ii) Cargo ships of 3000 gt and over engaged on international voyages.

(b) Existing ships

- i) Roro passenger ships engaged on international voyages - to be fitted not later than the first survey on or after 1 July 2002.
- ii) Passenger ships other than Roro passenger ships to be fitted with not later than 1 January 2004

Application to existing cargo ship will be further considered by IMO's NAV Sub-Committee in accordance with Resolution MSC. 109(73).

(2) AIS (Automatic Identification System)

An AIS is a device which indicates the ship's identity automatically, by transmitting the ship's name, speed, course etc to ships and coastal radio VTS stations in the vicinity automatically. The device will be required to be carried onboard

(a) New ships

- i) Passenger ships regardless of their size
- ii) Cargo ship of 300 gt and over engaged on international voyages
- iii) Cargo ships of 500 gt and over not engaged on international voyages.

(b) Existing ships:

- i) Passenger ships engaged on international voyages by 1 July 2003
- ii) Tankers engaged on international voyages by the first survey

after 1 July 2003

- iii) Other ships engaged on international voyages
 - 50,000 gt and over by 1 July 2004
 - 10,000 gt and over (less than (a)) by 1 July 2005
 - 3,000 gt and over (less than (a)(b)) by 1 July 2006
 - less than 3,000 gt but 300 gt and over by 1 July 2007
- iv) The following ships not engaged on international voyages by 1 July 2008
 - Passenger ships
 - Other ships of 500 gt and over

(3) Sound reception system

A Sound reception system is a device to re-construct the sound outside to judge incoming direction approximately. The system will be required to be installed on a navigation bridge which is totally enclosed for all new ships irrespective of their size and navigation areas.

(4) ~~Means of correcting heading and bearings to true~~ Means to transmit heading information

This is a device for transmitting heading information from magnetic or gyro compass for input to the other equipment. The device will be required to be installed all new ships passenger ships regardless of their size and cargo ships of 300 gt and over. (for both types of ships, it applies to regardless of navigation areas).

(5) Back up system for ECDIS

~~For Ships using ECDIS in lieu of paper charts, an back up system~~ The system will be required to be installed all ships of irrespective of size using an ECDIS.

(6) Automatic Tracking Aid (ATA)

~~ATA is a simplified ARPA, which can track targets but cannot plot them.~~ ATA is a simplified ARPA, which will plot the bearing and distance of targets automatically and monitor the risk of collision. ATA will be required to be installed onboard all new ships (regardless of navigation areas) of 500 gt and over. In case of ships of 3000 gt and over, 2nd ATA is required to be fitted to 2nd RADAR.

(7) Electronic Plotting Aid (EPA)

EPA is a device for plotting the range and bearing of targets electronically. EPA will be required to be installed onboard all new ships (regardless of navigation areas) of 300 gt and over.

(8) Heading or track control system

A heading control system is a system which controls the heading direction, and a track control system is a system which controls not only heading but also position and speed of ships in order to follows the track previously set. The system will be required to be installed onboard all new ships (regardless of navigation areas) of 10,000 gt and over.

(9) Speed and distance measuring device (over the ground)

This is a device to indicate speed and distance over the ground in the forward and athwartships direction, and will be required to be installed onboard all new ships (regardless of navigation areas) of 50,000 gt and over.

(10) Positioning system such as GPS

A positioning system will be required to be installed onboard all ships (regardless of navigation areas and including existing ships) irrespective of their size. For existing ships,

such system will be required to be installed by the first survey on or after 1 July 2002.

(11) Radar reflector

The device will be required to be installed onboard all new ships of less than 150 gt (regardless of navigation areas) if it is practicable

(12) Propulsion and operational mode indicator

Required to be installed new ships of 500 gt and above. It indicates the force and direction of lateral thrust if applicable

- Chapter V / Reg. 19 & Reg. 20 (Shipborne navigational systems and equipment)

(Equipment which installation requirements of is enhanced)

(1) Standard magnetic compass

Extended to ships less than 150 gt

(2) Spare magnetic compass

Extended to passenger ships less than 150 gt

(3) Primary Radar (9GHz radar)

Extended to passenger ships less than 500 gt and to cargo ships of less than 500 gt but 300 gt or over

(4) Second radar (3GHz)

Extended to ships less than 10.000 gt but 3,000 gt or over

(5) Echo sounder

Extended to passenger ship less than 500 gt and cargo ships less than 500 gt but 300 gt or over

(6) Daylight signalling lamps

Extended to ships not engaged on international voyages. For passenger ships, it also extended to new passenger ships less than 150 gt.

(7) Rate of turn indicator

Extended to ships less than 100,000 gt but 50,000 gt or over

(8) Speed and distance measuring device (through water)

Extended to passenger ships less than 500 gt and cargo ship less than 500 gt but 300 gt or more

(9) Gyro compass bearing repeater

Extended to ships less than 1,600 gt but 500 gt or more, as far as possible

Note: Notwithstanding above, (for both New equipment required and Equipment which installation requirements of is enhanced), application to the following ships are to be decided by individual flag States.

- ships below 150 gt engaged on any voyage
- ships below 500 gt not engaged on international voyages
- fishing vessels

- Chapter IX

A sentence is added to clarify that ISM Code is a mandatory instrument. In addition, to rectify duplication both given in the SOLAS and the ISM Code, a part of SOLAS regulation IX/6 is deleted.

- Chapter X

- Definitions have been amended to identify the 1994 Code and the 2000 Code.
- The expression “excluding craft the full of which is supported completely clear above the water surface in non-displacement mode by aerodynamic forces generated by ground effect” has been added to the definition for the High Speed Craft (HSC).
- The definition of keel lay is amended from 1% of the estimated mass of all structural material to 3 % of all material.
- The provision regarding application of the 2000 Code to existing craft are given as “ships which undergo repairs, alterations, modifications of major character on or after 1 July 2002.”

- Appendix

In relation to the total revision of chapter V in which carriage requirements for Shipborne Navigational Equipment have been revised, attachments to the certificates, i.e., “Record of Equipment for the Passenger Ship Safety Certificate (Form P)” and “Record of Equipment for the Cargo Ship Safety Equipment Certificate (Form E)” have been amended.

2 Amendments to the 1988 Protocol of the SOLAS convention (Resolution MSC.100(73))

Applies to: All ships to which SOLAS 88 Protocol applies

Entry into force: 1 July 2002

Summary: Amendments to the record of the Passenger Ship Safety Certificate (Form P) & Cargo Ship Safety Equipment Certificate (Form E) (Details of navigational systems and equipment)

3 Amendments to mandatory instruments referred to by the convention

3.1 FPT Code (Resolution MSC.101(73))

Applies to: New High Speed Craft

Entry into force: 1 July 2002

Brief summary: New provisions regarding High Speed Craft are inserted.

3.2 IBC Code (Resolution MSC.102(73))

Applies to: Chemical tankers to which the IBC code applies (Chemical tankers engaged on international voyages regardless of their size.) (There are some provisions which are applicable to existing ships.) (In addition, for ships registered in States which are parties to the MARPOL Convention, the code applies to ships engaged on non-international voyages as well.)

Entry into force: 1 July 2002

Brief summary: Brief summary is given hereunder.

- 5.7 (Ship's cargo hoses)

Cargo hoses newly installed onboard ships on or after the date of entry into force are to be prototype-tested, such as pressure test etc.

- **Chapter 8 (Cargo tank venting)**

Secondary means will be required for the venting system. The requirements also applies to existing IBC tankers by the date of the first scheduled dry-docking after 1 July 2002 but not later than 1 July 2005. (However, Administrations may accept relaxation from the application for ships of less than 500 gt)

- **14.2.9 (Personnel Protection)**

Chemical tankers should have onboard medical first-aid equipment based on the guidelines developed by IMO.

- **15.3 (Carriage of Carbon disulphide)**

In addition to the “underwater pad” method, the “inert gas pad” method will be accepted.

- **16.3.3 (Operational requirements)**

Officers will be required to be trained in accordance with the guideline developed by IMO (*the Medical First Aid Guide for Use in Accidents Involving Dangerous Goods* and relevant provisions given in the STCW Codes).

3.3 IGC Code (Resolution MSC.103(73))

Applies to: Gas tankers to which the IGC code applies (gas tankers engaged on international voyages regardless of their size) (There are some provisions which are applicable to existing ships)

Entry into force: 1 July 2002

Summary: A set of amendments clarifying vague expressions are made.

- **3.7.2 (Interbarrier spaces)**

Amendments to are made to the drainage system has been made. Such a system must be provided with removal spool pieces.

- **3.7.4 (Duct keel)**

For the arrangement connecting pumps in the engine room, requirements has been re-written in order to clarify the case where a wet duct keel is used and the case where a dry duct keel with ballast piping passing through is used.

- **4.8.3 (Insulation)**

Steels required to be calculated for determining the grade were specified just as “members” previously. The amendments clarifies that such steels are “structural members”

- **4.10.10.3.7 (Pneumatic testing of pressure vessel)**

Pneumatic testing of pressure vessel other than cargo tanks should only be considered on an individual case basis by the Administration.

- **5.6.4 (Emergency shut down valves)**

The definition concerning the full closing requirements within 30 seconds has been clarified.

In addition to the actual operating time, a time period after the reception of the signal before the initiation of the operation will also be taken into account. Also, in closing valves, surge pressure of the pipeline must be avoided. (applies to new ships only)

- 5.7 (Cargo hoses)

Cargo hoses installed onboard ships on or after the date of entry into force are to be prototype-tested, such as pressure test etc..

- 8.2.7 (Cargo tank vent systems)

In addition to the changing of the set pressure, the resetting of the alarms must be carried out under the supervision of the master in accordance with procedures approved by the Administration and specified in the ship's operating manual.

- 9.5.3 (Inert gas production system)

A provision stating "When not in use, the inert gas system should be made separate from the cargo system in the cargo area except for connections to the hold spaces or interbarrier spaces" has been added.

- 11.2.4 (Fire water main equipment)

A description of galvanised pipe was given as example for the arrangements to be resistant to corrosion for water nozzles in the code but is now deleted.

- 13.3.1 (Overflow control)

Amendments have been made regarding emergency shut down valves and loading rate in order to prevent pressure surges. As for alternative arrangements, flag States have been deleted as an authority which may agree upon such arrangements and now only port State authority is left as an authority.

- 14.3.2 (Personnel Protection)

The ship should have onboard medical first-aid equipment based on the guidelines developed by IMO.

- 18.3.3 (Operational requirements)

Officers will be required to be trained in accordance with the guidelines developed by IMO (*the Medical First Aid Guide for Use in Accidents Involving Dangerous Goods* and relevant provisions given in the STCW Codes).

3.4 ISM Code (Resolution MSC.104(73))

Applies to: Ships to which the ISM Code applies

Entry into force: 1 July 2002

Brief summary: (There are no substantial changes with regard to the requirements on Safety Management Systems.)

- 13 (Certification and Periodical Verification)

Previously, renewal audit was allowed to commence 6 months prior to the end of the validity, however, it is amended that only cases where renewal audits are commenced within 3 months prior to the termination of validity can carry over the same validation date.

- 15 (Verification)

As a new section, a provision requiring compliance with the IMO's guideline (A.788(19) - Guidelines on Implementation of the International Safety Management (ISM) Code by Administrations, in carrying out verification has been added..

- 16 (Forms of Certificates)

As a new section, formats of certificates, i.e., DOCUMENT OF COMPLIANCE, SAFETY MANAGEMENT CERTIFICATE, INTERIM DOCUMENT OF COMPLIANCE and INTERIM SAFETY MANAGEMENT CERTIFICATE have been added. Furthermore, Certificates No. is required to be indicated even on the back side of the certificate and a term "Reference is made to paragraph 3.2.3 of Guidelines on Implementation of the International Safety Management (ISM) Code by Administrations (resolution A.788(19))" has been inserted after a term "if applicable" at the footnote for a term ADDITIONAL VERIFICATION given in the back side of the Safety Management Certificate.

3.5 A.744(18) (Resolution MSC.105(73))

Applies to: Ships to which the Enhanced Survey Programme (ESP) applies

Entry into force: 1 July 2002

Summary:

- 2.2.2 (both in Annex A and Annex B)

For ships of 15 years of age and over, inspection of the outside of the ship's bottom must be carried out with the ship in dry dock, inspection while the ship is afloat will not be allowed.

- Section 8 and new Annex 12 (Annex B = Tankers only)

For ships of 130m in length and upwards, the ship's longitudinal strength must be evaluated when the ship has reached 10 years of age.

Following the above amendments, a consolidated text of the resolution incorporating all amendments since its adoption as A.744(18) will be published as an IMO publication.

3.6 FSS Code (Resolution MSC.98(73))

Applies to: New ships subject to the provision of SOLAS Chapter II-2

Entry into force: 1 July 2002

Brief summary:

- General

As a result of comprehensive amendments to SOLAS Chapter II-2, the text of the convention is left to only basic requirements. The detailed technical standards are separately provided in a mandatory code called *the International Code for the Fire Safety Systems (FSS Code)*

adopted simultaneously. Basically, the code contains the existing SOLAS requirements, however, the following new requirements are given in the Code

- Chapter 3, paragraph 2.2 (Emergency Escape Breathing Devices; EEBD)

As the EEBD is introduced as a new mandatory requirement in the new SOLAS Chapter II-2, the specification of the EEBD is given in the code.

- Chapter 11, Low Location Lighting

It should be noted that reference is made to IMO Assembly resolution A.752 (18) and the ISO Standard, rather than IACS Uniform Interpretation. There may be some implication in actual implementation.

3.7 HSC Code (2000 HSC Code) (Resolution MSC.97(73))

Applies to: New High Speed Craft to which High Speed Craft Code (HSC Code) applies

Entry into force: 1 July 2002

Summary:

- Updates the present HSC Code which was adopted in 1994 and entered in force in 1996, keeping with technological developments.
- Incorporate "load line" requirements.
- Excludes craft the hull of which is supported completely clear above the water surface in non-displacement mode by aerodynamic forces generated by ground effect.
- The definition of keel lay is amended from 1% of the estimated mass of all structural material to 3 % of the materials.

2 Amendments to the 1988 Protocol of the SOLAS convention (Resolution MSC.100(73))

Applies to: All ships to which SOLAS 88 Protocol applies

Entry into force: 1 July 2002

Summary: Amendments to the record of the Passenger Ship Safety Certificate (Form P) & Cargo Ship Safety Equipment Certificate (Form E) (Details of navigational systems and equipment)

4 Other mandatory instruments enter into force in 2001.

4.1 Amendments to MARPOL Regulation I/13G

Originally, phasing out periods for existing single hull tankers were given as 25 years for Pre-MARPOL and 30 years for MARPOL tankers respectively. However, the planned phasing out periods are amended to accelerate phasing out of these tankers. The details of new scheme will be informed as a separate technical information on this issue. The amendments to the convention will enter into force on 1 September 2002.

4.2 Compliance with the ISM Code

For passenger ships, tankers, bulk carriers and others, the compliance to the ISM Code were required to be made by 1 July 1998. For the remaining types of ships (these engaged on international voyages subject to SOLAS convention), the compliance are required to be made by 1 July 2002.

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