Amendments of IGF Code (MSC.551(108))

Object of Amendment

Rules for the Survey and Construction of Steel Ships Part GF
Guidance for the Survey and Construction of Steel Ships Parts B and GF
Guidance for High Speed Craft
Guidance for the Survey and Construction of Passenger Ships
Guidance for the Survey and Construction of Inland Waterway Ships

Reason for Amendment

The International Code of Safety for Ships Using Gases or Other Low-flashpoint Fuels (hereinafter referred to as the "IGF Code") entered into force on 1 January 2017 and has already been incorporated into the NK Rules.

Although the IGF Code is intended to apply to newly constructed ships using low-flashpoint fuels, it has been reviewed and amended to provide additional interpretations and make other changes as deemed necessary by the IMO since entering into force. As a result, amendments to the IGF Code were adopted as resolution MSC.551(108) at the 108th session of the IMO Maritime Safety Committee (MSC108) in May 2024, and these amendments will enter into force on 1 January 2026.

Accordingly, relevant requirements are amended based on resolution MSC.551(108).

Outline of Amendment

(1) Amends requirements for the sizing of pressure relief valves (PRV) to specify that the pressure relief system for each liquefied gas fuel tank is to be designed so that, regardless of the state of any one PRV, the capacity of the residual PRVs meets the combined relieving capacity requirements of the system.
(2) Specifies that when intending to use connections other than those complying with ISO 21593:2019 at bunkering manifolds, such connections are to be combined with operating procedures that ensure a dry-disconnect is achieved.
(3) Specifies requirements for emergency release systems used at the bunkering manifold.
(4) Amends requirements on redundancy of fuel supply in the case of single fuel installations.
(5) Amends the requirements for design pressure of ventilated ducts and outer pipes for gas fuel piping that have design pressures not exceeding 1.0 *MPa* so that the design pressure can be based on the maximum built-up pressure and local instantaneous peak pressure in way of an inner pipe rupture.
(6) Specifies that a portable dry powder extinguisher is to be provided for fuel preparation rooms for all ships using low-flashpoint fuels regardless of when constructed.
(7) Amends the hazardous area zone category for interbarrier spaces from Zone 1 to Zone 0.
(8) Specifies requirements for level indicators for liquefied gas fuel tanks which penetrate such tanks.

Effective Date and Application

Effective date of the amendment is 1 January 2026

ID:DD24-33

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

Amended	Original	Remarks
RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part GF SHIPS USING LOW-FLASHPOINT FUELS** **Chapter 2 DEFINITIONS** **2.2 Definitions (*IGF Code* 2.2)** **2.2.1 Terms*** (-1 to -44 are omitted.) **45** "Ship constructed on or after 1 January 2026" means ships that fall under any of the following. (1) for which the building contract is placed on or after 1 January 2026; (2) in the absence of a building contract, the keels of which are laid or which are at a similar stage of construction on or after 1 July 2026; or (3) the delivery of which is on or after 1 January 2030.	**RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part GF SHIPS USING LOW-FLASHPOINT FUELS** **Chapter 2 DEFINITIONS** **2.2 Definitions (*IGF Code* 2.2)** **2.2.1 Terms*** (-1 to -44 are omitted.) (Newly added)	MSC.551(108) IGF Code 2.2.43
Chapter 4 GENERAL REQUIREMENTS **4.2 Risk Assessment (*IGF Code* 4.2)** **4.2.2 Scope of Risk Assessment** For ships to which **Chapters 5** to **15** of this Part ap-	**Chapter 4 GENERAL REQUIREMENTS** **4.2 Risk Assessment (*IGF Code* 4.2)** **4.2.2 Scope of Risk Assessment** For ships to which **Chapters 5** to **15** of this Part ap-	MSC.551(108)

Amended	Original	Remarks
plies, the risk assessment required by **4.2.1** need only be conducted where explicitly required by **5.10.5**, **5.12.3**, **6.4.1-1**, **6.4.15-4(7)(b)**, **8.3.1-1**, **8.4.2**, **13.4.1**, **13.7** and **15.8.1(10)** as well as by **4-4** and **6-8** of **Annex 6.4.16**.	plies, the risk assessment required by **4.2.1** need only be conducted where explicitly required by **5.10.5**, **5.12.3**, **6.4.1-1**, **6.4.15-4(7)(b)**, **8.3.1-1**, **13.4.1**, **13.7** and **15.8.1(10)** as well as by **4-4.** and **6-8.** of **Annex 6.4.16**.	IGF Code 4.2.2 Includes 8.4.2 (bunker manifolds) in the scope of risk assessment.
Chapter 5 SHIP DESIGN AND ARRANGEMENT	**Chapter 5 SHIP DESIGN AND ARRANGEMENT**	
5.3 General Requirements (*IGF Code* 5.3)	**5.3 General Requirements (*IGF Code* 5.3)**	
5.3.3 Fuel Tank Location The fuel tank(s) are to be protected from external damage caused by collision or grounding in the following way: ((1) and (2) are omitted.) (3) For independent tanks, the protective distance is to be measured to the tank shell (the primary barrier of the fuel containment system). For membrane tanks, the distance is to be measured to the bulkheads surrounding the tank insulation. ((4) to (8) are omitted.)	**5.3.3 Fuel Tank Location** The fuel tank(s) are to be protected from external damage caused by collision or grounding in the following way: ((1) and (2) are omitted.) (3) For independent tanks the protective distance is to be measured to the tank shell (the primary barrier of the tank containment system). For membrane tanks the distance is to be measured to the bulkheads surrounding the tank insulation. ((4) to (8) are omitted.)	MSC.551(108) IGF Code 5.3.3 Change in terminology
5.3.4 Alternative Fuel Tank Locations As an alternative to **5.3.3(1)** above, the following calculation method may be used to determine the acceptable location of the fuel tanks: ((1) to (3) are omitted.) (4) For independent tanks, the protective distance is to be measured to the tank shell (the primary barrier of the fuel containment system). For membrane tanks, the distance is to be measured to the bulkheads surrounding the tank insulation.	**5.3.4 Alternative Fuel Tank Locations** As an alternative to **5.3.3(1)** above, the following calculation method may be used to determine the acceptable location of the fuel tanks: ((1) to (3) are omitted.) (4) For independent tanks the protective distance is to be measured to the tank shell (the primary barrier of the tank containment system). For membrane tanks the distance is to be measured to the bulkheads surrounding the tank insulation.	MSC.551(108) IGF Code 5.3.4 Change in terminology

Amended	Original	Remarks
((5) to (8) are omitted.)	((5) to (8) are omitted.)	
5.12 Airlocks (*IGF Code* 5.12)	**5.12 Airlocks (*IGF Code* 5.12)**	
5.12.1 Structure*	**5.12.1 Structure**	
For ships constructed on or after 1 January 2026, an airlock is a space enclosed by gastight bulkheads with two substantially gastight doors spaced at least 1.5 *m* and not more than 2.5 *m* apart. Unless subject to the requirements of the **11.3.2**, **11.3.3**, **14.6** and **14.7, Part 1, Part C**, the sill height of the door leading to the hazardous area is not to be less than 300 *mm*. The doors are to be self-closing without any holding back arrangements.	An airlock is a space enclosed by gastight bulkheads with two substantially gastight doors spaced at least 1.5 *m* and not more than 2.5 *m* apart. Unless subject to the requirements of the **11.3.2**, **11.3.3**, **14.6** and **14.7, Part 1, Part C**, the door sill is not to be less than 300 *mm* in height. The doors are to be self-closing without any holding back arrangements.	MSC.551(108) IGF Code 5.12.1 Clarifies the requirements of airlock sill height
Chapter 6 FUEL CONTAINMENT SYSTEM	**Chapter 6 FUEL CONTAINMENT SYSTEM**	
6.4 Liquefied Gas Fuel Containment (*IGF Code* 6.4)	**6.4 Liquefied Gas Fuel Containment (*IGF Code* 6.4)**	
6.4.15 Tank Types*	**6.4.15 Tank Types***	
3 Type *C* Independent Tanks	**3** Type *C* Independent Tanks	MSC.551(108) IGF Code 6.4.15
(1) Design basis	(1) Design basis	
(a) The design basis for type *C* independent tanks is based on pressure vessel criteria modified to include fracture mechanics and crack propagation criteria. The minimum design pressure defined in **6.4.15-3(1)(b)** is intended to ensure that the dynamic stress is sufficiently low so that an initial surface flaw will not propagate more than half the thickness of the shell during the lifetime of the tank.	(a) The design basis for type *C* independent tanks is based on pressure vessel criteria modified to include fracture mechanics and crack propagation criteria. The minimum design pressure defined in **6.4.15-3(1)(b)** is intended to ensure that the dynamic stress is sufficiently low so that an initial surface flaw will not propagate more than half the thickness of the shell during the lifetime of the tank.	
(b) The design vapour pressure is not to be less	(b) The design vapour pressure is not to be less	

Amended	Original	Remarks
than: $P_0 = 0.2 + A \cdot C(\rho_r)^{1.5}(MPa)$ where: $A = 0.00185\left(\frac{\sigma_m}{\Delta\sigma_A}\right)^2$ with: σ_m: design primary membrane stress; $\Delta\sigma_A$: allowable dynamic membrane stress (double amplitude at probability level Q=10^{-8}) and equal to: $55N/mm^2$: for ferritic-perlitic, martensitic and austenitic steel; $25N/mm^2$: for aluminium alloy (5083-O); C: a characteristic tank dimension to be taken as the greatest of the following: h, $0.75b$ or $0.45l$, with: h: height of tank (dimension in ship's vertical direction) (m); b: width of tank (dimension in ship's transverse direction) (m); l : length of tank (dimension in ship's longitudinal direction) (m); ρ_r: the relative density of the fuel ($\rho_r = 1$ for fresh water) at the design temperature. When a specified design life of the tank is longer than 10^8 wave encounters, $\Delta\sigma_A$ is to be modified to give equivalent crack propagation corresponding to the design life. ((c) is omitted.) ((2) and (3) are omitted.)	than: $P_0 = 0.2 + A \cdot C(\rho_r)^{1.5}(MPa)$ where: $A = 0.00185\left(\frac{\sigma_m}{\Delta\sigma_A}\right)^2$ with: σ_m : design primary membrane stress; $\Delta\sigma_A$: allowable dynamic membrane stress (double amplitude at probability level Q=10^{-8}) and equal to: $55N/mm^2$: for ferritic-perlitic, martensitic and austenitic steel; $25N/mm^2$: for aluminium alloy (5083-O); C: a characteristic tank dimension to be taken as the greatest of the following: h, $0.75b$ or $0.45l$, with: h: height of tank (dimension in ship's vertical direction) (m); b: width of tank (dimension in ship's transverse direction) (m); l : length of tank (dimension in ship's longitudinal direction) (m); ρ_r: the relative density of the cargo ($\rho_r = 1$ for fresh water) at the design temperature. When a specified design life of the tank is longer than 10^8 wave encounters, $\Delta\sigma_A$ is to be modified to give equivalent crack propagation corresponding to the design life. ((c) is omitted.) ((2) and (3) are omitted.)	Change in terminology

Amended	Original	Remarks
6.7 Pressure Relief System (*IGF Code* 6.7)	**6.7 Pressure Relief System (*IGF Code* 6.7)**	
6.7.3 Sizing of Pressure Relieving System*	**6.7.3 Sizing of Pressure Relieving System***	
1 Sizing of pressure relief valves	**1** Sizing of pressure relief valves	MSC.551(108) IGF Code 6.7.3
(1) For ships constructed on or after 1 January 2026, the pressure relief system for each liquefied gas fuel tank is to be designed so that, regardless of the state of any one *PRV*, the capacity of the residual *PRVs* meets the combined relieving capacity requirements of the system. The combined relieving capacity is to be the greater of the following, with no more than a 20% rise in liquefied gas fuel tank pressure above the *MARVS*. The tank is not to be loaded until the full relieving capacity is restored:	(1) *PRVs* are to have a combined relieving capacity for each liquefied gas fuel tank to discharge the greater of the following, with not more than a 20% rise in liquefied gas fuel tank pressure above the *MARVS*:	Added a condition for pressure relief system that one of PRVs (required at least two) cannot be used.
(a) the maximum capacity of the liquefied gas fuel tank inerting system if the maximum attainable working pressure of the liquefied gas fuel tank inerting system exceeds the *MARVS* of the liquefied gas fuel tanks; or	(a) the maximum capacity of the liquefied gas fuel tank inerting system if the maximum attainable working pressure of the liquefied gas fuel tank inerting system exceeds the *MARVS* of the liquefied gas fuel tanks; or	
(b) vapours generated under fire exposure computed using the following formula: $Q = FGA^{0.82}$ (m^3/s) where Q: minimum required rate of discharge of air at standard conditions of 273.15 Kelvin (K) and 0.1013 *MPa*. F: fire exposure factor for different liquefied gas fuel tank types: $F = 1.0$: for tanks without insulation located on deck; $F = 0.5$: for tanks above the deck when insulation is approved by the Society (Approval will be based on the use of a fire-	(b) vapours generated under fire exposure computed using the following formula: $Q = FGA^{0.82}$ (m^3/s) where Q: minimum required rate of discharge of air at standard conditions of 273.15 Kelvin (K) and 0.1013 *MPa*. F: fire exposure factor for different liquefied gas fuel types: $F = 1.0$: for tanks without insulation located on deck; $F = 0.5$: for tanks above the deck when insulation is approved by the Society. (Approval will be based on the use of a fire-	

Amended	Original	Remarks
proofing material, the thermal conductance of insulation, and its stability under fire exposure); $F = 0.5$: for uninsulated independent tanks installed in holds; $F = 0.2$: for insulated independent tanks in holds (or uninsulated independent tanks in insulated holds); $F = 0.1$: for insulated independent tanks in inerted holds (or uninsulated independent tanks in inerted, insulated holds); and $F = 0.1$: for membrane tanks. For independent tanks partly protruding through the weather decks, the fire exposure factor is to be determined on the basis of the surface areas above and below deck. (The following is omitted.)	proofing material, the thermal conductance of insulation, and its stability under fire exposure); $F = 0.5$: for uninsulated independent tanks installed in holds; $F = 0.2$: for insulated independent tanks in holds (or uninsulated independent tanks in insulated holds); $F = 0.1$: for insulated independent tanks in inerted holds (or uninsulated independent tanks in inerted, insulated holds); and $F = 0.1$: for membrane tanks. For independent tanks partly protruding through the weather decks, the fire exposure factor is to be determined on the basis of the surface areas above and below deck. (The following is omitted.)	
6.9 The Maintaining of Fuel Storage Condition (*IGF Code* 6.9)	**6.9 The Maintaining of Fuel Storage Condition (*IGF Code* 6.9)**	
6.9.1 Control of Tank Pressure and Temperature*	**6.9.1 Control of Tank Pressure and Temperature***	
1 For ships constructed on or after 1 January 2026, with the exception of liquefied gas fuel tanks designed to withstand the full gauge vapour pressure of the fuel under conditions of the upper ambient design temperature, liquefied gas fuel tanks' pressure and temperature are to be maintained at all times within their design range by means acceptable to the Society, e.g. by one or more of the following methods: (1) reliquefaction of vapours; (2) thermal oxidation of vapours; (3) pressure accumulation; or	1 With the exception of liquefied gas fuel tanks designed to withstand the full gauge vapour pressure of the fuel under conditions of the upper ambient design temperature, liquefied gas fuel tanks' pressure and temperature are to be maintained at all times within their design range by means acceptable to the Society, e.g. by one of the following methods: (1) reliquefaction of vapours; (2) thermal oxidation of vapours; (3) pressure accumulation; or	MSC.551(108) IGF Code 7.3.2 Clarifies that multiple measures (1) to (4) may be used

Amended	Original	Remarks
(4) liquefied gas fuel cooling. The method chosen is to be capable of maintaining tank pressure below the set pressure of the tank pressure relief valves for a period of 15 *days* assuming full tank at normal service pressure and the ship in idle condition, i.e. only power for domestic load is generated.	(4) liquefied gas fuel cooling. The method chosen is to be capable of maintaining tank pressure below the set pressure of the tank pressure relief valves for a period of 15 *days* assuming full tank at normal service pressure and the ship in idle condition, i.e. only power for domestic load is generated.	
Chapter 7 MATERIAL AND GENERAL PIPE DESIGN	**Chapter 7 MATERIAL AND GENERAL PIPE DESIGN**	
7.3 General Pipe Design (*IGF Code* 7.3)	**7.3 General Pipe Design (*IGF Code* 7.3)**	
7.3.2 Wall Thickness*	**7.3.2 Wall Thickness***	
1 For ships constructed on or after 1 January 2026, the minimum wall thickness is to be calculated as follows: $t = \frac{t_0 + b + c}{1 - \lvert a \rvert / 100} (mm)$ where: t_0: theoretical thickness $t_0 = PD/(2Ke + P)$ (mm) with: P: design pressure (MPa) referred to in **7.3.3**; D: outside diameter (mm); K: allowable stress (N/mm^2) referred to in **7.3.4**; and e: efficiency factor equal to 1.0 for seamless pipes and for longitudinally or spirally welded pipes, delivered by approved manufacturers of welded pipes, that are considered equivalent to seamless pipes when non-destructive testing on welds is carried	**1** The minimum wall thickness is to be calculated as follows: $t = \frac{t_0 + b + c}{1 - a / 100} (mm)$ where: t_0 : theoretical thickness $t_0 = PD/(2Ke + P)$ (mm) with: P : design pressure (MPa) referred to in **7.3.3**; D : outside diameter (mm); K : allowable stress (N/mm^2) referred to in **7.3.4**; and e : efficiency factor equal to 1.0 for seamless pipes and for longitudinally or spirally welded pipes, delivered by approved manufacturers of welded pipes, that are considered equivalent to seamless pipes when non-destructive testing on welds is carried	MSC.551(108) IGF Code 7.3.2 Changes to absolute value

Amended	Original	Remarks
out in accordance with standards recognized by the Society. In other cases, an efficiency factor of less than 1.0, in accordance with standards recognised by the Society, may be required depending on the manufacturing process; b: allowance for bending (*mm*). The value of b is to be chosen so that the calculated stress in the bend, due to internal pressure only, does not exceed the allowable stress. Where such justification is not given, b is to be: $b = \frac{Dt_0}{2.5r}(mm)$ with: r : mean radius of the bend (*mm*); c: corrosion allowance (*mm*) deemed appropriate by the Society. This allowance is to be consistent with the expected life of the piping; and a: negative manufacturing tolerance for thickness (%), i.e. where a is the manufacturing tolerance of −5 %, $\lvert a \rvert$ is equal to 5 and to be entered into the formula as 1 − (5/100).	out in accordance with standards recognized by the Society. In other cases an efficiency factor of less than 1.0, in accordance with standards recognized by the Society, may be required depending on the manufacturing process; b : allowance for bending (*mm*). The value of b is to be chosen so that the calculated stress in the bend, due to internal pressure only, does not exceed the allowable stress. Where such justification is not given, b is to be: $b = \frac{Dt_0}{2.5r}(mm)$ with: r : mean radius of the bend (*mm*); c : corrosion allowance (*mm*) deemed appropriate by the Society. This allowance is to be consistent with the expected life of the piping; and a : negative manufacturing tolerance for thickness (%).	
Chapter 8 BUNKERING	**Chapter 8 BUNKERING**	
8.4 Manifold (*IGF Code* 8.4)	**8.4 Manifold (*IGF Code* 8.4)**	
8.4.1 Manifolds*	**8.4.1 Manifolds***	
The bunkering manifold is to be designed to withstand the external loads during bunkering. The connections at the bunkering station are to be arranged in order to achieve	The bunkering manifold is to be designed to withstand the external loads during bunkering. The connections at the bunkering station are to be of dry-disconnect type	MSC.551(108) MSC.1/Circ.1677 IGF Code 8.4.1

Amended	Original	Remarks
a dry-disconnect operation in one of the following ways: (1) a dry-disconnect/connect coupling in accordance with a standard at least equivalent to those acceptable to the Society; (2) a manual connect coupler or hydraulic connect coupler, used to connect the bunker system to the receiving vessel bunkering manifold presentation flange in accordance with a standard deemed appropriate by the Society; or (3) a bolted flange to flange assembly in accordance with a standard deemed appropriate by the Society.	equipped with additional safety dry break-away coupling/ self-sealing quick release. The couplings are to be of a standard type.	Adds (2) and (3) so that connections other than those of the standard type (ISO 21593:2019) are accepted.
8.4.2 In cases where Connections Specified in 8.4.1(2) or 8.4.1(3) are Used	**(Newly added)**	
When intended to use either of the connections specified in paragraphs **8.4.1(2)** and **8.4.1(3)**, these are be combined with operating procedures that ensure a dry-disconnect is achieved. The arrangement is to be subject to special consideration informed by a bunkering arrangement risk assessment conducted at the design stage and considering dynamic loads at the bunkering manifold connection to a recognised standard acceptable to the Society, the safe operation of the ship and other hazards that may be relevant to the ship during bunkering operation. The fuel handling manual required by **17.3.1** is to include documentation that the bunkering arrangement risk assessment was conducted, and that special consideration was granted under this **8.4.1**.	(Newly added)	MSC.551(108) IGF Code 8.4.2 Additional requirements for connection other than the standard type
8.4.3 Emergency Release Coupler/Emergency Release System*	**(Newly added)**	
An emergency release coupler (ERC)/Emergency Release System (ERS) or equivalent means are to be provided, unless installed on the bunkering supply side of the bunkering line, and the said means are to be in accordance with a standard	(Newly added)	MSC.551(108) IGF Code 8.4.3 Adds requirements for

Amended	Original	Remarks
equivalent to those acceptable to the Society; it is to enable a quick physical disconnection "dry break-away" of the bunker system in an emergency event.		ERC/ERS
Chapter 9 FUEL SUPPLY TO CONSUMERS	**Chapter 9 FUEL SUPPLY TO CONSUMERS**	
9.3 Redundancy of Fuel Supply (*IGF Code* 9.3)	**9.3 Redundancy of Fuel Supply (*IGF Code* 9.3)**	
9.3.1 Redundancy*	**9.3.1 Redundancy**	
For ships constructed on or after 1 January 2026, for single fuel installations the fuel supply system is to be arranged with redundancy and segregation, so that a leakage in one system, or failure of one of the fuel supply essential auxiliaries, does not lead to an unacceptable loss of power. In the event of a leakage or failure, and in accordance with **1.3.1-4, Part D**, the Society, having regard to overall safety considerations, may accept a partial reduction in propulsion capability from normal operation.	For single fuel installations the fuel supply system is to be arranged with full redundancy and segregation all the way from the fuel tanks to the consumer, so that a leakage in one system does not lead to an unacceptable loss of power.	MSC.551(108) IGF Code 9.3.1 Clarifies "full redundancy"
9.4 Safety Functions of Gas Supply System (*IGF Code* 9.4)	**9.4 Safety Functions of Gas Supply System (*IGF Code* 9.4)**	
9.4.7 Ventilation of Gas Supply Branch Downstream of the Double Block and Bleed Valves*	**9.4.7 Ventilation of Gas Supply Branch Downstream of the Double Block and Bleed Valves**	
For ships constructed on or after 1 January 2026, in cases where the master gas fuel valve is automatically shut down when the safety system as required in **15.2.2-2** is activated, the complete gas supply pipe between this master gas fuel valve and the double block and bleed valves and between the double block and bleed valves and the consumer are to be automatically vented.	In cases where the master gas fuel valve is automatically shutdown, the complete gas supply branch downstream of the double block and bleed valve is to be automatically ventilated assuming reverse flow from the engine to the pipe.	MSC.551(108) IGF Code 9.4.7 Added between master valve to DBB Amends from "ventilated" to "vented"

Amended	Original	Remarks
9.4.8 Shutdown Valves of Gas Supply Line*	**9.4.8 Shutdown Valves of Gas Supply Line**	
For ships constructed on or after 1 January 2026, there is to be one manually operated shutdown valve in the gas supply line to each gas consumer upstream of the double block and bleed valves to assure safe isolation during maintenance on the gas consumer.	There is to be one manually operated shutdown valve in the gas supply line to each engine upstream of the double block and bleed valves to assure safe isolation during maintenance on the engine.	MSC.551(108) IGF Code 9.4.8 Amends from "engine" to "gas consumer"
9.6 Fuel Supply to Consumers in Gas-safe Machinery Spaces (*IGF Code* 9.6)	**9.6 Fuel Supply to Consumers in Gas-safe Machinery Spaces (*IGF Code* 9.6)**	
9.6.1 Fuel Piping*	**9.6.1 Fuel Piping***	
Gas fuel piping in gas-safe machinery spaces is to be completely enclosed by a double pipe or duct fulfilling one of the following **(1)** to **(3)** conditions:	Fuel piping in gas-safe machinery spaces is to be completely enclosed by a double pipe or duct fulfilling one of the conditions following **(1)** to **(3)**.	MSC.551(108) IGF Code 9.6.1.1
(1) the gas fuel piping is to be a double wall piping system with the gas fuel contained in the inner pipe. The space between the concentric pipes is to be pressurised with inert gas at a pressure greater than the gas fuel pressure. Suitable alarms are to be provided to indicate a loss of inert gas pressure between the pipes;	(1) the gas piping is to be a double wall piping system with the gas fuel contained in the inner pipe. The space between the concentric pipes is to be pressurized with inert gas at a pressure greater than the gas fuel pressure. Suitable alarms are to be provided to indicate a loss of inert gas pressure between the pipes. When the inner pipe contains high pressure gas, the system is to be so arranged that the pipe between the master gas valve and the engine is automatically purged with inert gas when the master gas valve is closed; or	Deletes the requirement for automatic purging
(2) the gas fuel piping is to be installed within a ventilated pipe or duct. The air space between the gas fuel piping and the wall of the outer pipe or duct is to be equipped with mechanical underpressure ventilation having a capacity of at least 30 air changes per hour. This ventilation capacity may be reduced to 10 air changes per hour provided automatic filling of	(2) the gas fuel piping is to be installed within a ventilated pipe or duct. The air space between the gas fuel piping and the wall of the outer pipe or duct is to be equipped with mechanical underpressure ventilation having a capacity of at least 30 air changes per hour. This ventilation capacity may be reduced to 10 air changes per hour provided automatic filling of	

Amended	Original	Remarks
the duct with nitrogen upon detection of gas is arranged for. The fan motors are to comply with the required explosion protection in the installation area. The ventilation outlet is to be covered by a protection screen and placed in a position where no flammable gas-air mixture may be ignited; or (3) other solutions providing an equivalent safety level may also be accepted by the Society.	the duct with nitrogen upon detection of gas is arranged for. The fan motors are to comply with the required explosion protection in the installation area. The ventilation outlet is to be covered by a protection screen and placed in a position where no flammable gas-air mixture may be ignited; or (3) other solutions providing an equivalent safety level may also be accepted by the Society.	
9.8 The Design of Ventilated Duct, Outer Pipe against Inner Pipe Gas Leakage (*IGF Code* 9.8)	**9.8 The Design of Ventilated Duct, Outer Pipe against Inner Pipe Gas Leakage (*IGF Code* 9.8)**	
9.8.1 Design Pressure of Outer Pipes or Ducts* For ships constructed on or after 1 January 2026, the design pressure of the outer pipe or duct of fuel systems is not to be less than the maximum working pressure of the inner pipe. Alternatively, the design pressure of the outer pipe or duct may be calculated in accordance with **9.8.2**.	**9.8.1 Design Pressure of Outer Pipes or Ducts** The design pressure of the outer pipe or duct of fuel systems is not to be less than the maximum working pressure of the inner pipe. Alternatively for fuel piping systems with a working pressure greater than 1.0 *MPa*, the design pressure of the outer pipe or duct is not to be less than the maximum built-up pressure arising in the annular space considering the local instantaneous peak pressure in way of any rupture and the ventilation arrangements.	MSC.551(108) IGF Code 9.8.1 Relaxes the requirement so that the design pressure of outer pipe/duct can be based on instantaneous peak pressure and so on even when working pressures 1 MPa or less.
9.8.2 Alternative Method for 9.8.1* **1** For ships constructed on or after 1 January 2026, alternatively to **9.8.1**, the design pressure of the outer pipe or duct is to be taken as the higher of the following **(1)** and **(2)**. (1) the maximum built-up pressure: static pressure (2) local instantaneous peak pressure in way of the rupture: this pressure is to be taken as the critical pressure given by the following expression:	**9.8.2 Design Pressure of High-pressure Fuel Piping** **1** For high-pressure fuel piping the design pressure of the ducting is to be taken as the higher of the following **(1)** and **(2)**. (1) the maximum built-up pressure: static pressure (2) local instantaneous peak pressure in way of the rupture: this pressure is to be taken as the critical pressure given by the following expression:	MSC.551(108) IGF Code 9.8.2 Same as above

Amended	Original	Remarks
$p = p_0 \left(\frac{2}{k+1}\right)^{\frac{k}{k-1}}$ where: p_0: maximum working pressure of the inner pipe k: C_p/C_v constant pressure specific heat divided by the constant volume specific heat k: 1.31 for CH_4	$p = p_0 \left(\frac{2}{k+1}\right)^{\frac{k}{k-1}}$ where: p_0: maximum working pressure of the inner pipe k: C_p/C_v constant pressure specific heat divided by the constant volume specific heat k: 1.31 for CH_4	
9.8.4 Testing and Dimension of Ducts*	**9.8.4 Testing and Dimension of Ducts**	
For ships constructed on or after 1 January 2026, the duct is to be pressure tested to show that it can withstand the expected maximum pressure at fuel pipe rupture.	For low pressure fuel piping the duct is to be dimensioned for a design pressure not less than the maximum working pressure of the fuel pipes. The duct is to be pressure tested to show that it can withstand the expected maximum pressure at fuel pipe rupture.	MSC.551(108) IGF Code 9.8.4 Same as above
Chapter 11 FIRE SAFETY	**Chapter 11 FIRE SAFETY**	
11.3 Fire Protection (*IGF Code* 11.3)	**11.3 Fire Protection (*IGF Code* 11.3)**	
11.3.1 General*	**11.3.1 General***	
1 For ships constructed on or after 1 January 2026, fuel preparation rooms are to, for the purpose of the application of **Chapter 9, Part R**, be regarded as a machinery space of category *A*.	**1** Any space containing equipment for the fuel preparation such as pumps, compressors, heat exchangers, vaporizers and pressure vessels are to be regarded as a machinery space of category *A* for fire protection purposes.	MSC.551(108) IGF Code 11.3.1 No substantial change
11.6 Dry Chemical Powder Fire-extinguishing System (*IGF Code* 11.6)	**11.6 Dry Chemical Powder Fire-extinguishing System (*IGF Code* 11.6)**	
11.6.1 General	**11.6.1 General**	
2 In addition to any other portable fire extinguishers that may be required elsewhere in **Part R**, one portable dry	**2** In addition to any other portable fire extinguishers that may be required elsewhere in **Part R**, one portable dry	MSC.551(108) IGF Code 11.6.2

Amended	Original	Remarks
powder extinguisher of at least 5 *kg* capacity is to be located near the bunkering station and in the fuel preparation room.	powder extinguisher of at least 5 *kg* capacity is to be located near the bunkering station.	A portable extinguisher is to be provided in the fuel preparation room. Existing ships also needs to be applied (refer B1.1.3)
Chapter 12 EXPLOSION PREVENTION	**Chapter 12 EXPLOSION PREVENTION**	
12.5 Hazardous Area Zones (*IGF Code* 12.5)	**12.5 Hazardous Area Zones (*IGF Code* 12.5)**	
12.5.1 Hazardous Area Zone 0*	**12.5.1 Hazardous Area Zone 0**	
For ships constructed on or after 1 January 2026, this zone includes but is not limited to the interiors of fuel tanks, any pipework for pressure-relief or other venting systems for fuel tanks, pipes and equipment containing fuel, and interbarrier spaces as defined by **2.2.1-15(2)**.	This zone includes, but is not limited to the interiors of fuel tanks, any pipework for pressure-relief or other venting systems for fuel tanks, pipes and equipment containing fuel.	MSC.551(108) IGF Code 12.5.1 Amends the zone category of interbarrier spaces
12.5.2 Hazardous Area Zone 1*	**12.5.2 Hazardous Area Zone 1***	
This zone includes but is not limited to: (1) For ships constructed on or after 1 January 2026, tank connection spaces and fuel storage hold spaces (fuel storage hold spaces for type C tanks are normally not considered as zone 1); ((2) to (9) are omitted.)	This zone includes, but is not limited to: (1) Tank connection spaces, fuel storage hold spaces and interbarrier spaces; ((2) to (9) are omitted.)	MSC.551(108) IGF Code 12.5.2.1 Same as above

Amended-Original Requirements Comparison Table (Amendments of IGF Code (MSC.551(108)))

Amended	Original	Remarks
Chapter 15 CONTROL, MONITORING AND SAFETY SYSTEMS	**Chapter 15 CONTROL, MONITORING AND SAFETY SYSTEMS**	
15.4 Bunkering and Liquefied Gas Fuel Tank Monitoring (*IGF Code* 15.4)	**15.4 Bunkering and Liquefied Gas Fuel Tank Monitoring (*IGF Code* 15.4)**	
15.4.1 Level Indicators for Liquefied Gas Fuel Tanks*	**15.4.1 Level Indicators for Liquefied Gas Fuel Tanks**	
3 For ships constructed on or after 1 January 2026, liquefied gas fuel tank liquid level gauges may be of the following types:	**3** Liquefied gas fuel tank liquid level gauges may be of the following types:	MSC.551(108) IGF Code 15.4.1.3
(1) indirect devices, which determine the amount of fuel by means such as weighing or in-line flow metering;	(1) indirect devices, which determine the amount of fuel by means such as weighing or in-line flow metering; or	
(2) closed devices, which do not penetrate the liquefied gas fuel tank, such as devices using radio-isotopes or ultrasonic devices; or	(2) closed devices, which do not penetrate the liquefied gas fuel tank, such as devices using radio-isotopes or ultrasonic devices;	
(3) closed devices which penetrate the liquefied gas fuel tank but which form part of a closed system and keep the gas fuel from being released. Such devices are to be considered as tank connections. If the closed gauging device is not mounted directly onto the tank, it is to be provided with a shutoff valve located as close as possible to the tank.		Level indicators which penetrate the tanks are acceptable

Amended	Original	Remarks
Chapter 16 MANUFACTURE, WORKMANSHIP AND TESTING	**Chapter 16 MANUFACTURE, WORKMANSHIP AND TESTING**	
16.3 Welding of Metallic Materials and Non-destructive Testing for the Fuel Containment System (with reference to *IGF Code* 16.3)	**16.3 Welding of Metallic Materials and Non-destructive Testing for the Fuel Containment System (with reference to *IGF Code* 16.3)**	
16.3.5 Production Weld Tests*	**16.3.5 Production Weld Tests***	
1 For all fuel tanks and process pressure vessels except membrane tanks, production weld tests are to generally be performed for approximately each 50 *m* of butt-weld joints and are to be representative of each welding position. For secondary barriers, the same type production tests as required for primary barriers are to be performed, except that the number of tests may be reduced subject to agreement with the Society. Tests, other than those specified in **-2** to **-5** may be required for fuel tanks or secondary barriers.	**1** For all fuel tanks and process pressure vessels except membrane tanks, production weld tests are to generally be performed for approximately each 50 *m* of butt-weld joints and are to be representative of each welding position. For secondary barriers, the same type production tests as required for primary tanks are to be performed, except that the number of tests may be reduced subject to agreement with the Society. Tests, other than those specified in **-2** to **-5** may be required for fuel tanks or secondary barriers._	MSC.551(108) IGF Code 16.3.5.1 Change in terminology
Chapter 17 OPERATING REQUIREMENTS	**Chapter 17 OPERATING REQUIREMENTS**	
17.5 Operating Requirements	**17.5 Operating Requirements**	
17.5.4 Bunkering Operation*	**17.5.4 Bunkering Operation***	
1 Responsibility	**1** Responsibility	MSC.551(108) IGF Code 18.4.1.1
(1) Before any bunkering operation commences, the master of the receiving ship or their representative and the representative of the bunkering source (Persons-in-Charge, PIC) is to do the following **(a)** to **(c)**:	(1) Before any bunkering operation commences, the master of the receiving ship or his representative and the representative of the bunkering source (Persons In Charge, PIC) is to do following **(a)** to **(c)**:	Added items to be confirmed before bunkering
(a) agree in writing the transfer procedure, includ-	(a) agree in writing the transfer procedure, includ-	

Amended	Original	Remarks
ing cooling down and if necessary, gassing up; the maximum transfer rate at all stages; minimum and maximum limiting transfer pressure and temperature; bunkering line *PRV*s settings; and volume to be transferred; (b) agree in writing action to be taken in an emergency; and (c) complete and sign the bunker safety check-list. (2) Upon completion of bunkering operations, the ship PIC is to receive and sign a Bunker Delivery Note for the fuel delivered, containing at least the information specified in the annex to *IGF Code* part C-1, completed and signed by the bunkering source PIC.	ing cooling down and if necessary, gassing up; the maximum transfer rate at all stages and volume to be transferred; (b) agree in writing action to be taken in an emergency; and (c) complete and sign the bunker safety check-list. (2) Upon completion of bunkering operations the ship PIC is to receive and sign a Bunker Delivery Note for the fuel delivered, containing at least the information specified in the annex to *IGF Code* part C-1, completed and signed by the bunkering source PIC.	

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 (21) are omitted.) (22) Ships using low-flashpoint fuels ((a) to (c) are omitted.) (d) For ships that fall under the following **i)** or **ii)**, a survey is to be carried out to verify compliance with **4.2.2, 5.12.1, 6.7.3-1(1), 6.9.1-1, 7.3.2-1, 8.4, 9.3.1, 9.4.7, 9.4.8, 9.6.1, 9.8.1, 9.8.2, 9.8.4, 11.3.1-1, 11.6.1-2, 12.5.1, 12.5.2** and **15.4.1-3, Part GF of the Rules** before using low-flashpoint fuels or undertaking to use different low-flashpoint fuels than specified: i) ships which convert to using low-flashpoint fuels on or after 1 January 2026; or ii) ships which, on or after 1 January 2026, undertake to use low-flashpoint fuels different from those which they were originally approved to use before 1 January 2026.	**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 (21) are omitted.) (22) Ships using low-flashpoint fuels ((a) to (c) are omitted.) (Newly added)	

Amended-Original Requirements Comparison Table (Amendments of IGF Code (MSC.551(108)))

Amended	Original	Remarks
((23) and (24) are omitted.) (25) Amendments to IGF Code (MSC.551(108)) For ships other than those ships defined in **2.2.1-45, Part GF of the Rules**, a survey is to be carried out by the due date of the first Annual, Intermediate or Special Survey on or after 1 January 2026 to verify compliance with **4.2.2, 8.4** and **11.6.1-2, Part GF of the Rules**.	((23) and (24) are omitted.) (Newly added)	

Amended	Original	Remarks
Part GF SHIPS USING LOW-FLASHPOINT FUELS	**Part GF SHIPS USING LOW-FLASHPOINT FUELS**	
GF5.12 Airlocks	(Newly added)	
GF5.12.1 Structure	(Newly added)	
In applying **2.2.1-11, Part GF of the Rules**, for ships other than those constructed on or after 1 January 2026, an airlock is a space enclosed by gastight bulkheads with two substantially gastight doors spaced at least 1.5 *m* and not more than 2.5 *m* apart. Unless subject to **11.3.2**, **11.3.3**, **14.6** and **14.7, Part 1, Part C of the Rules**, the door sill is not to be less than 300 *mm* in height. The doors are to be self-closing without any holding back arrangements.	(Newly added)	Moved requirements for ships other than those constructed on or after 1 January 2026 from Part GF of the Rules
GF6 FUEL CONTAINMENT SYSTEM	**GF6 FUEL CONTAINMENT SYSTEM**	
GF6.7 Pressure Relief System	**GF6.7 Pressure Relief System**	
GF6.7.3 Sizing of Pressure Relieving System	**GF6.7.3 Sizing of Pressure Relieving System**	
1 In applying **6.7.3-1(1), Part GF of the Rules**, for ships other than those constructed on or after 1 January 2026, *PRVs* are to have a combined relieving capacity for each liquefied gas fuel tank to discharge the greater of the following, with not more than a 20 % rise in liquefied gas fuel tank pressure above the *MARVS*:	(Newly added)	Moved requirements for ships other than those constructed on or after 1 January 2026 from Part GF of the Rules
(1) the maximum capacity of the liquefied gas fuel tank inerting system if the maximum attainable working pressure of the liquefied gas fuel tank inerting system exceeds the *MARVS* of the liquefied gas fuel		

Amended	Original	Remarks
tanks; or (2) vapours generated under fire exposure computed $Q = FGA^{0.82}$ (m^3/s) where: Q: minimum required rate of discharge of air at standard conditions of 273.15 Kelvin (K) and 0.1013 MPa. F: fire exposure factor for different liquefied gas fuel types: $F = 1.0$: for tanks without insulation located on deck; $F = 0.5$: for tanks above the deck when insulation is approved by the Society. (Approval will be based on the use of a fire-proofing material, the thermal conductance of insulation, and its stability under fire exposure); $F = 0.5$: for uninsulated independent tanks installed in holds; $F = 0.2$: for insulated independent tanks in holds (or uninsulated independent tanks in insulated holds); $F = 0.1$: for insulated independent tanks in inerted holds (or uninsulated independent tanks in inerted, insulated holds); and $F = 0.1$: for membrane tanks. For independent tanks partly protruding through the weather decks, the fire exposure factor is to be determined on the basis of the surface areas above and below deck. G: gas factor according to formula:		

Amended	Original	Remarks
$G = \frac{12.4}{L_h D_h}\sqrt{\frac{ZT}{M}}$ where: T: temperature in Kelvin at relieving conditions, i.e. 120 % of the pressure at which the pressure relief valve is set; L_h: latent heat of the material being vaporised at relieving conditions, in *kJ/kg*; D_h: a constant based on relation of specific heats k and is calculated as follows: $D_h = \sqrt{k\left(\frac{2}{k+1}\right)^{\frac{k+1}{k-1}}}$ where: k = ratio of specific heats at relieving conditions, and the value of which is between 1.0 and 2.2. If k is not known, D = 0.606 is to be used; Z : compressibility factor of the gas at relieving conditions; if not known, Z = 1.0 is to be used; M: molecular mass of the product. A : external surface area of the tank (m^2), as for different tank types, as shown in **Fig. GF6.4 of the Rules**. The gas factor of each liquefied gas fuel to be carried is to be determined and the highest value is to be used for *PRV* sizing.		
2 In applying **6.7.3-1(1)(b)** and **Fig. GF6.4, Part GF of the Rules**, the external surface area A (m^2) of prismatic tanks is to be calculated in accordance with the following **(1)** or	In applying **6.7.3-1(1)(b)** and **Fig. GF6.4, Part GF of the Rules**, the external surface area A (m^2) of prismatic tanks is to be calculated in accordance with the following **(1)** or	

Amended	Original	Remarks
(2). In this context, the L_{min} specified in the following **(1)** and **(2)**, for non-tapered tanks, is the smaller of the horizontal dimensions (length or width) of the flat bottom of the tank. For tapered tanks (See **Fig. GF6.7.3-1**), the L_{min} is the smaller of the length and the average width. (1) In cases where distance between the flat bottom of the tank and bottom of the hold space is equal to or less than L_{min}/10: External surface area minus flat bottom surface area (2) In cases where distance between the flat bottom of the tank and bottom of the hold space is greater than L_{min}/10: External surface area	**(2)**. In this context, the L_{min} specified in the following **(1)** and **(2)**, for non-tapered tanks, is the smaller of the horizontal dimensions (length or width) of the flat bottom of the tank. For tapered tanks (See **Fig. GF6.7.3-1**), the L_{min} is the smaller of the length and the average width. (1) In cases where distance between the flat bottom of the tank and bottom of the hold space is equal to or less than L_{min}/10: External surface area minus flat bottom surface area (2) In cases where distance between the flat bottom of the tank and bottom of the hold space is greater than L_{min}/10: External surface area	
GF6.9 The Maintaining of Fuel Storage Condition	**GF6.9 The Maintaining of Fuel Storage Condition**	
GF6.9.1 Control of Tank Pressure and Temperature **1** In applying **6.9.1-1, Part GF of the Rules**, liquefied gas fuel tanks' pressure and temperature are to be controlled and maintained within the design range at all times including after activation of the safety system required in **15.2.2-2, Part GF of the Rules** for a period of minimum 15 *days*.	**GF6.9.1 Control of Tank Pressure and Temperature** **1** In applying **6.9.1-1, Part GF of the Rules**, liquefied gas fuel tanks' pressure and temperature are to be controlled and maintained within the design range at all times including after activation of the safety system required in **15.2.2-2, Part GF of the Rules** for a period of minimum 15 *days*.	
2 In applying **6.9.1-1, Part GF of the Rules**, for ships other than those constructed on or after 1 January 2026, with the exception of liquefied gas fuel tanks designed to withstand the full gauge vapour pressure of the fuel under conditions of the upper ambient design temperature, liquefied gas fuel tanks' pressure and temperature are to be maintained at all times within their design range by means acceptable to the Society, e.g. by one of the following methods: (1) reliquefaction of vapours;	(Newly added)	Moved requirements for ships other than those constructed on or after 1 January 2026 from Part GF of the Rules

Amended	Original	Remarks
(2) thermal oxidation of vapours; (3) pressure accumulation; or (4) liquefied gas fuel cooling. The method chosen is to be capable of maintaining tank pressure below the set pressure of the tank pressure relief valves for a period of 15 *days* assuming full tank at normal service pressure and the ship in idle condition, i.e. only power for domestic load is generated. **3** In applying **6.9.1-2, Part GF of the Rules**, the activation of the safety system specified in **-1** above alone is not deemed as an emergency situation.	**2** In applying **6.9.1-2, Part GF of the Rules**, the activation of the safety system specified in **-1** above alone is not deemed as an emergency situation.	
GF7 MATERIAL AND GENERAL PIPE DESIGN	**GF7 MATERIAL AND GENERAL PIPE DESIGN**	
GF7.3 General Pipe Design	**GF7.3 General Pipe Design**	
GF7.3.2 Wall Thickness **1** (Omitted) **2** (Omitted) **3** In applying **7.3.2-1, Part GF of the Rules**, for ships other than those constructed on or after 1 January 2026, the minimum wall thickness is to be calculated as follows: $t = \frac{t_0 + b + c}{1 - a/100}(mm)$ where: t_0: theoretical thickness $t_0 = PD/(2Ke + P)\ (mm)$ with: P: design pressure (MPa) referred to in **7.3.3**; D : outside diameter (mm); K : allowable stress (N/mm^2) referred to in	**GF7.3.2 Wall Thickness** **1** (Omitted) **2** (Omitted) (Newly added)	Moved requirements for ships other than those constructed on or after 1 January 2026 from Part GF of the Rules

Amended	Original	Remarks
7.3.4; and e : efficiency factor equal to 1.0 for seamless pipes and for longitudinally or spirally welded pipes, delivered by approved manufacturers of welded pipes, that are considered equivalent to seamless pipes when non-destructive testing on welds is carried out in accordance with standards recognised by the Society. In other cases, an efficiency factor of less than 1.0, in accordance with standards recognised by the Society, may be required depending on the manufacturing process; b : allowance for bending (mm). The value of b is to be chosen so that the calculated stress in the bend, due to internal pressure only, does not exceed the allowable stress. Where such justification is not given, b is to be: $b = \frac{Dt_0}{2.5r}(mm)$ with: r : mean radius of the bend (mm); c : corrosion allowance (mm) deemed appropriate by the Society. This allowance is to be consistent with the expected life of the piping; and a : negative manufacturing tolerance for thickness (%).		
4 In applying **7.3.2-2, Part GF of the Rules**, the value given in column F of **Table D12.6(2), Part D of the Rules** for carbon-*Mn* steel and the value corresponding to Schedule 10*S* for stainless steel are to be used. However, for steel pipes provided with effective corrosion control or not ar-	**3** In applying **7.3.2-2, Part GF of the Rules**, the value given in column F of **Table D12.6(2), Part D of the Rules** for carbon-*Mn* steel and the value corresponding to Schedule 10*S* for stainless steel are to be used. However, for steel pipes provided with effective corrosion control or not ar-	

Amended	Original	Remarks
ranged under corrosive environment, the value may be reduced to the extent acceptable to the Society with a limitation of 1 *mm*. Furthermore, the value for pipes in fuel tanks and pipes having open ends may also be reduced to the extent acceptable to the Society.	ranged under corrosive environment, the value may be reduced to the extent acceptable to the Society with a limitation of 1*mm*. Furthermore, the value for pipes in fuel tanks and pipes having open ends may also be reduced to the extent acceptable to the Society.	
GF8 BUNKERING	**GF8 BUNKERING**	
GF8.4 Manifold	**GF8.4 Manifold**	
GF8.4.1 Manifolds	**GF8.4.1 Manifolds**	
1 "A standard at least equivalent to those acceptable to the Society" specified in **8.4.1(1), Part GF of the Rules** means *ISO* 21593:2019.	For an example of the "standard type" of coupling specified in **8.4.1, Part GF of the Rules**, refer to *ISO* 21593:2019.	MSC.551(108) MSC.1/Circ.1677 IGF Code 8.4.1 Note 1
2 "In accordance with a standard deemed appropriate by the Society" specified in **8.4.1(2)** and **(3), Part GF of the Rules** means *ISO* 20591:2021.	(Newly added)	MSC.551(108) MSC.1/Circ.1677 IGF Code 8.4.1 Note 2
3 Requirements **4.4.2** and **8.4.1** to **8.4.3, Part GF of the Rules** may be applied before 1 January 2026 at the discretion of the Administration.	(Newly added)	MSC.1/Circ.1677 Circular for early implementation.
GF8.4.3 Emergency Release Coupler/Emergency Release System	**(Newly added)**	
"In accordance with a standard equivalent to those acceptable to the Society" specified in **8.4.3, Part GF of the Rules** means *ISO* 205891:2021.	(Newly added)	MSC.551(108) MSC.1/Circ.1677 IGF Code 8.4.1 Note 2

Amended	Original	Remarks
GF9.3 Redundancy of Fuel Supply	**(Newly added)**	
GF9.3.1 Redundancy In applying **9.3.1, Part GF of the Rules**, for ships other than those constructed on or after 1 January 2026, for single fuel installations the fuel supply system is to be arranged with full redundancy and segregation all the way from the fuel tanks to the consumer, so that a leakage in one system does not lead to an unacceptable loss of power.	**(Newly added)** (Newly added)	Moved requirements for ships other than those constructed on or after 1 January 2026 from Part GF of the Rules
GF9.4.7 Ventilation of Gas Supply Branch Downstream of the Double Block and Bleed Valves	**(Newly added)**	
In applying **9.4.7, Part GF of the Rules**, for ships other than those constructed on or after 1 January 2026, in cases where the master gas fuel valve is automatically shutdown, the complete gas supply branch downstream of the double block and bleed valve is to be automatically ventilated assuming reverse flow from the engine to the pipe.	(Newly added)	Moved requirements for ships other than those constructed on or after 1 January 2026 from Part GF of the Rules
GF9.8 The Design of Ventilated Duct, Outer Pipe against Inner Pipe Gas Leakage	**(Newly added)**	
GF9.8.1 Design Pressure of Outer Pipes or Ducts In applying **9.8.1, Part GF of the Rules**, for ships other than those constructed on or after 1 January 2026, the design pressure of the outer pipe or duct of fuel systems is not to be less than the maximum working pressure of the inner pipe. Alternatively for fuel piping systems with a working pressure greater than 1.0 *MPa*, the design pressure of the outer pipe or duct is not to be less than the maximum built-up pressure arising in the annular space considering the local instantaneous peak pressure in way of any rupture and the ventilation	**(Newly added)** (Newly added)	Moved requirements for ships other than those constructed on or after 1 January 2026 from Part GF of the Rules

Amended	Original	Remarks
arrangements. **GF9.8.2 Alternative Method for 9.8.1** In applying **9.8.2-1, Part GF of the Rules**, for ships other than those constructed on or after 1 January 2026, for high-pressure fuel piping the design pressure of the ducting is to be taken as the higher of the following **(1)** and **(2)**. (1) the maximum built-up pressure: static pressure (2) local instantaneous peak pressure in way of the rupture: this pressure is to be taken as the critical pressure given by the following expression: $p = p_0 \left(\frac{2}{k+1}\right)^{\frac{k}{k-1}}$ where: p_0: maximum working pressure of the inner pipe k: C_p/C_v constant pressure specific heat divided by the constant volume specific heat k: 1.31 for CH_4	**(Newly added)** (Newly added)	Moved requirements for ships other than those constructed on or after 1 January 2026 from Part GF of the Rules
GF9.8.4 Testing and Dimension of Ducts In applying **9.8.4, Part GF of the Rules**, for ships other than those constructed on or after 1 January 2026, for low pressure fuel piping the duct is to be dimensioned for a design pressure not less than the maximum working pressure of the fuel pipes. The duct is to be pressure tested to show that it can withstand the expected maximum pressure at fuel pipe rupture.	**(Newly added)** (Newly added)	Moved requirements for ships other than those constructed on or after 1 January 2026 from Part GF of the Rules

Amended	Original	Remarks
GF11 FIRE SAFETY	**GF11 FIRE SAFETY**	
GF11.3 Fire Protection	**GF11.3 Fire Protection**	
GF11.3.1 General	**GF11.3.1 General**	
(-1 to -4 are omitted.)	(-1 to -4 are omitted.)	Moved requirements for ships other than those constructed on or after 1 January 2026 from Part GF of the Rules
5 In applying **11.3.1-1, Part GF of the Rules**, for ships other than ships constructed on or after 1 January 2026, any space containing equipment for the fuel preparation such as pumps, compressors, heat exchangers, vapourisers and pressure vessels are to be regarded as a machinery space of category *A* for fire protection purposes.	(Newly added)	
GF12 EXPLOSION PREVENTION	**GF12 EXPLOSION PREVENTION**	
GF12.5 Hazardous Area Zones	**GF12.5 Hazardous Area Zones**	
GF12.5.1 Hazardous Area Zone 0	**(Newly added)**	
In applying **12.5.1, Part GF of the Rules**, for ships other than those constructed on or after 1 January 2026, this zone includes but is not limited to the interiors of fuel tanks, any pipework for pressure-relief or other venting systems for fuel tanks, pipes and equipment containing fuel.	(Newly added)	Moved requirements for ships other than those constructed on or after 1 January 2026 from Part GF of the Rules
GF12.5.2 Hazardous Area Zone 1	**GF12.5.2 Hazardous Area Zone 1**	
1 (Omitted)	**1** (Omitted)	
2 (Omitted)	**2** (Omitted)	
3 In applying **12.5.2(1), Part GF of the Rules**, for ships other than those constructed on or after 1 January 2026, this zone includes but is not limited to tank connection spac-	(Newly added)	Moved requirements for ships other than those constructed on or after 1 January 2026 from Part

Amended	Original	Remarks
es, fuel storage hold spaces and interbarrier spaces. **4** The wording "areas on open deck, or semi-enclosed spaces on deck, within 3 *m* of any fuel tank outlet, gas or vapour outlet" specified in **12.5.2(3), Part GF of the Rules** means, for example, all areas within 3 *m* of fuel tank hatches, ullage openings or sounding pipes for fuel tanks located on open deck and gas vapour outlets.	**3** The wording "areas on open deck, or semi-enclosed spaces on deck, within 3 *m* of any fuel tank outlet, gas or vapour outlet" specified in **12.5.2(3), Part GF of the Rules** means, for example, all areas within 3 *m* of fuel tank hatches, ullage openings or sounding pipes for fuel tanks located on open deck and gas vapour outlets.	GF of the Rules
GF15.4.1 Level Indicators for Liquefied Gas Fuel Tanks In applying **15.4.1-3, Part GF of the Rules**, for ships other than those constructed on or after 1 January 2026, liquefied gas fuel tank liquid level gauges may be of the following types: (1) indirect devices, which determine the amount of fuel by means such as weighing or in-line flow metering; or (2) closed devices, which do not penetrate the liquefied gas fuel tank, such as devices using radio-isotopes or ultrasonic devices.	**(Newly added)** (Newly added)	Moved requirements for ships other than those constructed on or after 1 January 2026 from Part GF of the Rules

Amended	Original	Remarks
GUIDANCE FOR HIGH SPEED CRAFT **Part 2 CLASS SURVEYS** **Chapter 1 GENERAL** **1.1 Surveys** **1.1.3 Occasional Surveys** For the occasional surveys specified in **1.1.3(5), Part 2 of the Rules**, the following is to be complied with: ((1) and (2) are omitted.) (3) Crafts Using Low-flashpoint Fuels ((a) to (c) are omitted.) (d) For ships that fall under the following **i)** or **ii)**, a survey is to be carried out to verify compliance with **4.2.2, 5.12.1, 6.7.3-1(1), 6.9.1-1, 7.3.2-1, 8.4, 9.3.1, 9.4.7, 9.4.8, 9.6.1, 9.8.1, 9.8.2, 9.8.4, 11.3.1-1, 11.6.1-2, 12.5.1, 12.5.2** and **15.4.1-3, Part GF of the Rules for the Survey and Construction of Steel Ships** before using low-flashpoint fuels or undertaking to use different low-flashpoint fuels than specified: i) Ships which convert to using low-flashpoint fuels on or after 1 January 2026; or ii) Ships which, on or after 1 January 2026, undertake to use low-flashpoint fuels different from those which they were originally approved to use before 1 January 2026.	**GUIDANCE FOR HIGH SPEED CRAFT** **Part 2 CLASS SURVEYS** **Chapter 1 GENERAL** **1.1 Surveys** **1.1.3 Occasional Surveys** For the occasional surveys specified in **1.1.3(5), Part 2 of the Rules**, the following is to be complied with: ((1) and (2) are omitted.) (3) Crafts Using Low-flashpoint Fuels ((a) to (c) are omitted.) (Newly added)	

Amended-Original Requirements Comparison Table (Amendments of IGF Code (MSC.551(108)))

Amended	Original	Remarks
(4) Amendments to IGF Code (MSC.551(108)) For ships other than those ships defined in **2.2.1-45, Part GF of the Rules for the Survey and Construction of Steel Ships**, a survey is to be carried out by the due date of the first Annual, Intermediate or Special Survey on or after 1 January 2026 to verify compliance with **4.2.2, 8.4** and **11.6.1-2, Part GF of the Rules for the Survey and Construction of Steel Ships**.	(Newly added)	

Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF PASSENGER SHIPS **Part 2 CLASS SURVEY** **Chapter 1 GENERAL** **1.1 Surveys** **1.1.3 Intervals of Class Maintenance Surveys** **1** For the application of the requirements of **1.1.3-3, Part 2 of the Rules**, in addition to the requirements specified in **B1.1.3-3** (except for **(22)**), **Part B of the Guidance for the Survey and Construction of Steel Ships**, occasional surveys are to be in accordance with those specified in **(1)** to **(7)** below: ((1) to (5) are omitted.) (6) Ships Using Low-flashpoint Fuels ((a) to (c) are omitted.) (d) For ships that fall under the following **i)** or **ii)**, a survey is to be carried out to verify compliance with **4.2.2, 5.12.1, 6.7.3-1(1), 6.9.1-1, 7.3.2-1, 8.4, 9.3.1, 9.4.7, 9.4.8, 9.6.1, 9.8.1, 9.8.2, 9.8.4, 11.3.1-1, 11.6.1-2, 12.5.1, 12.5.2** and **15.4.1-3, Part GF of the Rules of the Survey and Construction of Steel Ships** before using low-flashpoint fuels or undertaking to use different low-flashpoint fuels than specified: i) Ships which convert to using low-flashpoint	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF PASSENGER SHIPS** **Part 2 CLASS SURVEY** **Chapter 1 GENERAL** **1.1 Surveys** **1.1.3 Intervals of Class Maintenance Surveys** **1** For the application of the requirements of **1.1.3-3, Part 2 of the Rules**, in addition to the requirements specified in **B1.1.3-3** (except for **(22)**), **Part B of the Guidance for the Survey and Construction of Steel Ships**, occasional surveys are to be in accordance with those specified in **(1)** to **(7)** below: ((1) to (5) are omitted.) (6) Ships Using Low-flashpoint Fuels ((a) to (c) are omitted.) (Newly added)	

Amended-Original Requirements Comparison Table (Amendments of IGF Code (MSC.551(108)))

Amended	Original	Remarks
fuels on or after 1 January 2026; or ii) Ships which, on or after 1 January 2026, undertake to use low-flashpoint fuels different from those which they were originally approved to use before 1 January 2026. ((7) is omitted.) (8) Amendments to IGF Code (MSC.551(108)) For ships other than those ships defined in **2.2.1-45, Part GF of the Rules of the Survey and Construction of Steel Ships**, a survey is to be carried out by the due date of the first Annual, Intermediate or Special Survey on or after 1 January 2026 to verify compliance with **4.2.2**, **8.4** and **11.6.1-2, Part GF of the Rules for the Survey and Construction of Steel Ships**.	((7) is omitted.) (Newly added)	

Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF INLAND WATERWAY SHIPS **Part 2 CLASS SURVEYS** **Chapter 1 GENERAL** **1.1 Surveys** **1.1.2 Class Maintenance Surveys** **1** Modifications and changes that are subject to Occasional Surveys referred to in **1.1.2-2(3), Part 2 of the Rules** are as specified in **(1)** through **(5)** below: ((1) to (4) are omitted.) (5) Ships Using Low-flashpoint Fuels ((a) to (c) are omitted.) (d) For ships that fall under the following **i)** or **ii)**, a survey is to be carried out to verify compliance with **4.2.2, 5.12.1, 6.7.3-1(1), 6.9.1-1, 7.3.2-1, 8.4, 9.3.1, 9.4.7, 9.4.8, 9.6.1, 9.8.1, 9.8.2, 9.8.4, 11.3.1-1, 11.6.1-2, 12.5.1, 12.5.2** and **15.4.1-3, Part GF of the Rules for the Survey and Construction of Steel Ships** before using low-flashpoint fuels or undertaking to use different low-flashpoint fuels than specified: i) Ships which convert to using low-flashpoint fuels on or after 1 January 2026; or ii) Ships which, on or after 1 January 2026,	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF INLAND WATERWAY SHIPS** **Part 2 CLASS SURVEYS** **Chapter 1 GENERAL** **1.1 Surveys** **1.1.2 Class Maintenance Surveys** **1** Modifications and changes that are subject to Occasional Surveys referred to in **1.1.2-2(3), Part 2 of the Rules** are as specified in **(1)** through **(5)** below: ((1) to (4) are omitted.) (5) Ships Using Low-flashpoint Fuels ((a) to (c) are omitted.) (Newly added)	

Amended	Original	Remarks
undertake to use low-flashpoint fuels different from those which they were originally approved to use before 1 January 2026. (6) Amendments to IGF Code (MSC.551(108)) For ships other than those ships defined in **2.2.1-45, Part GF of the Rules for the Survey and Construction of Steel Ships**, a survey is to be carried out by the due date of the first Annual, Intermediate or Special Survey on or after 1 January 2026 to verify compliance with **4.2.2**, **8.4** and **11.6.1-2, Part GF of the Rules for the Survey and Construction of Steel Ships**.	(Newly added)	
EFFECTIVE DATE AND APPLICATION **1.** The effective date of the amendments is 1 January 2026.		