Recent Amendments to the IGC Code (MSC.566(109)) and Review of Existing Requirements (Machinery Related)

Object of Amendment

Rules for the Survey and Construction of Steel Ships Part N
Guidance for the Survey and Construction of Steel Ships Parts GF and N

Reason for Amendment

The Society has incorporated the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code) into Part N of its Rules for the Survey and Construction of Steel Ships.

In recent years, ammonia has been attracting attention as a zero-emission fuel, and currently there are plans worldwide for the newbuilding of ammonia carriers that will use ammonia as fuel for their engines. On the other hand, Chapter 16 of the IGC Code stipulates that the use of cargoes identified as toxic products as fuel is not permitted. Therefore, the possibility of using ammonia as fuel was discussed by the IMO. As a result, an amendment to the IGC Code to permit the use of ammonia as fuel was agreed upon, provided that the same level of safety as natural gas is ensured. This amendment was adopted as MSC.566(109) at the 109th session of the IMO Maritime Safety Committee (MSC109) held in December 2024.

Accordingly, relevant requirements are amended in accordance with MSC.566(109).

In addition, the relevant guidance was reviewed, and the requirements for the burners for dual fuel boilers, which presuppose the use of an oil fuel burner for ignition, are amended to also allow the use of a spark ignition type burner.

Outline of the Amendment

The main contents of this amendment are as follows.

(1) Amends requirements related to toxic products that cannot be used as fuel.
(2) Amends requirements related to the burners for dual fuel boilers to include spark ignition types.

Effective Date and Application

(1) Chapter 16, Part N of the Rules for the Survey and Construction of Steel Ships
Effective date of the amendment is 1 July 2026.
(2) Annex 1, Part GF and Annex 1, Part N of the Guidance for the Survey and Construction of Steel Ships
Effective date of the amendment is 1 January 2026.

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

ID:DD25-19

Amended	Original	Remarks
RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part N SHIPS CARRYING LIQUEFIED GASES IN BULK** **Chapter 16 USE OF CARGO AS FUEL** **16.9 Alternative Fuels and Technologies (*IGC Code* 16.9)** **16.9.1 Alternative Fuels and Technologies** **1** If acceptable to the Administration, other cargo gases may be used as fuel, providing that the same level of safety as natural gas in this Part is ensured. **2** The use of cargoes requiring carriage in type 1G ships, as identified in column "c" in **Table N19.1**, is not to be permitted. If acceptable to the Administration, cargoes identified as toxic products in column "f" which are required to be carried in type 2G/2PG ships in column "c" in **Table N19.1** may be used as fuel, provided that the same level of safety as natural gas (methane) is ensured in accordance with the relevant requirements of this Rules, including those in **1.1.2**, and taking into account the guidelines developed by the *IMO*, after special consideration has been given by the Administration.	**RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part N SHIPS CARRYING LIQUEFIED GASES IN BULK** **Chapter 16 USE OF CARGO AS FUEL** **16.9 Alternative Fuels and Technologies (*IGC Code* 16.9)** **16.9.1 Alternative Fuels and Technologies** **1** If acceptable to the Administration, other cargo gases may be used as fuel, providing that the same level of safety as natural gas in this Part is ensured. **2** The use of cargoes identified as toxic products is not to be permitted.	Outline of the Amendment (1) MSC.566(109)
The effective date of the amendment is according to EFFECTIVE DATE AND APPLICATION (A)		

Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part GF SHIPS USING LOW-FLASHPOINT FUELS** **Annex 2 GUIDANCE FOR GAS-FUELLED BOILERS** **Chapter 2 CONSTRUCTION AND EQUIPMENT OF BOILER** **2.3 Burners** **3** Gas fuel burners are to be so arranged that they can be ignited individually only by flames of oil fuel burners unless the boiler and combustion equipment is designed and approved by the Society to light on gas fuel. In such cases, oil fuel burners are to be large enough to instantly ignite the gas fuel at any nozzle of gas fuel burners.	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part GF SHIPS USING LOW-FLASHPOINT FUELS** **Annex 2 GUIDANCE FOR GAS-FUELLED BOILERS** **Chapter 2 CONSTRUCTION AND EQUIPMENT OF BOILER** **2.3 Burners** **3** Gas fuel burners are to be so arranged that they can be ignited individually only by flames of oil fuel burners. In such cases, oil fuel burners are to be large enough to instantly ignite the gas fuel at any nozzle of gas fuel burners. (For reference: 10.4.5, Part GF of the Rules) Gas nozzles and the burner control system are to be configured such that gas fuel can only be ignited by an established oil fuel flame, unless the boiler and combustion equipment is designed and approved by the Society to light on gas fuel.	Outline of the Amendment (2) Amends in accordance with 10.4.5, Part GF of the Rules so that direct ignition type ones can be used.

Amended	Original	Remarks
Chapter 3 CONTROL SYSTEMS AND SAFETY SYSTEMS	**Chapter 3 CONTROL SYSTEMS AND SAFETY SYSTEMS**	
3.1 Control Systems	**3.1 Control Systems**	
3.1.1 Gas Burning Control Systems Control systems for gas fuel burning are to be in accordance with the requirements specified in the following **(1)** to **(5)**, in addition to the requirements of **18.4.1** and **18.4.2, Part D of the Rules**.	**3.1.1 Gas Burning Control Systems** Control systems for gas fuel burning are to be in accordance with the requirements specified in the following **(1)** to **(5)**, in addition to the requirements of **18.4.1** and **18.4.2, Part D of the Rules**.	Outline of the Amendment (2) Amends in conjunction with 2.3
(1) In cases where pilot burners are used for gas fuel ignition, it is to be so arranged that gas fuel is not supplied to burners until the flames of pilot burners are established and secured. In cases where gas fuel supply is initiated manually, it is to be so arranged that the gas fuel supply is cut off automatically when gas fuel supply valves are opened before flame of pilot burners are established, or that the gas fuel supply valves are locked until the pilot burner flames are established.	(1) It is to be so arranged that gas fuel is not supplied to burners until the flames of pilot burners used for gas fuel ignition are established and secured. In cases where gas fuel supply is initiated manually, it is to be so arranged that the gas fuel supply is cut off automatically when gas fuel supply valves are opened before flame of pilot burners are established, or that the gas fuel supply valves are locked until the pilot burner flames are established.	
(2) Control systems regulating oil/gas supply ratios are to be capable of maintaining combustion over the full range of loads approved for oil/gas burning with consideration given to ensuring sufficient supplies of combustion air.	(2) Control systems regulating oil/gas supply ratios are to be capable of maintaining combustion over the full range of loads approved for oil/gas burning with consideration given to ensuring sufficient supplies of combustion air.	
(3) Combustion air supplies for gas burning or oil/gas burning are to be automatically controlled to ensure safe combustion within the possible combustible range.	(3) Combustion air supplies for gas burning or oil/gas burning are to be automatically controlled to ensure safe combustion within the possible combustible range.	
(4) Combustion chambers of boilers are to be capable of automatic purging with sufficient volumes of air	(4) Combustion chambers of boilers are to be capable of automatic purging with sufficient volumes of air	

Amended	Original	Remarks
both before igniting base burners and after extinction of all burners. Arrangements deemed appropriate by the Society are to be made to enable boilers to be manually purged. (5) In the case of gas fuel supply rate control systems, it is to be so arranged that gas fuel supply rates are ensured not to be reduced less than predetermined minimum supply rates verified in advance by tests. **Annex 2A GUIDANCE FOR GAS COMBUSTION UNITS** **Chapter 2 CONSTRUCTION AND EQUIPMENT OF *GCU*** **2.3 Burners** (For reference) **4** Gas fuel burners are to be so arranged that they can be ignited individually only by flames of oil fuel burners. In such cases, oil fuel burners are to be large enough to instantly ignite the gas fuel at any nozzle of gas fuel burners. In the case of direct ignition type gas fuel burners specified in **3.2**, this requirement may be dispensed with.	both before igniting base burners and after extinction of all burners. Arrangements deemed appropriate by the Society are to be made to enable boilers to be manually purged. (5) In the case of gas fuel supply rate control systems, it is to be so arranged that gas fuel supply rates are ensured not to be reduced less than predetermined minimum supply rates verified in advance by tests. **Annex 2A GUIDANCE FOR GAS COMBUSTION UNITS** **Chapter 2 CONSTRUCTION AND EQUIPMENT OF *GCU*** **2.3 Burners** (For reference) **4** Gas fuel burners are to be so arranged that they can be ignited individually only by flames of oil fuel burners. In such cases, oil fuel burners are to be large enough to instantly ignite the gas fuel at any nozzle of gas fuel burners. In the case of direct ignition type gas fuel burners specified in **3.2**, this requirement may be dispensed with.	No amendment This chapter already includes direct ignition type

Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part N SHIPS CARRYING LIQUEFIED GASES IN BULK** **Annex 2 GUIDANCE FOR DUAL FUEL BOILERS** **Chapter 2 CONSTRUCTION AND EQUIPMENTS OF DF BOILER** **2.3 Burners** **3** Gas fuel burners are to be so arranged that they can be ignited individually only by a flame of an oil fuel burner unless the boiler and combustion equipment is designed and approved by the Society to light on gas fuel. In this case, oil fuel burner is to be large enough to instantly ignite the gas fuel at any nozzle of the gas fuel burners.	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part N SHIPS CARRYING LIQUEFIED GASES IN BULK** **Annex 2 GUIDANCE FOR DUAL FUEL BOILERS** **Chapter 2 CONSTRUCTION AND EQUIPMENTS OF DF BOILER** **2.3 Burners** **3** Gas fuel burners are to be so arranged that they can be ignited individually only by a flame of an oil fuel burner. In this case, oil fuel burner is to be large enough to instantly ignite the gas fuel at any nozzle of the gas fuel burners. (For reference: 16.6.2 Part N of the Rules) **4** Gas nozzles and the burner control system are to be configured such that gas fuel can only be ignited by an established oil fuel flame, unless the boiler and combustion equipment is designed and approved by recognized organization to light on gas fuel.	Outline of the Amendment (2) Amends in accordance with 16.6.2, Part N of the Rules so that direct ignition type ones can be used.

Amended	Original	Remarks
Chapter 3 CONTROL SYSTEMS AND SAFETY SYSTEMS	**Chapter 3 CONTROL SYSTEMS AND SAFETY SYSTEMS**	
3.1 Control Systems	**3.1 Control Systems**	
3.1.1 Gas Burning Control System	**3.1.1 Gas Burning Control System**	
Control systems for gas fuel burning are to comply with the following requirements **(1)** through **(7)**, in addition to the requirements of **18.4.1** and **18.4.2, Part D of the Rules**.	Control systems for gas fuel burning are to comply with the following requirements **(1)** through **(7)**, in addition to the requirements of **18.4.1** and **18.4.2, Part D of the Rules**.	Outline of the Amendment (2) Amends in conjunction with 2.3
(1) In cases where pilot burners are used for gas fuel ignition, it is to be so arranged that the gas fuel is not supplied to the burners until the flame of a pilot burner is established and secured. Where gas fuel supply is initiated manually, it is to be so arranged that the gas fuel supply is cut off automatically when the gas fuel supply valve is opened before the flame of a pilot burner is established, or the gas fuel supply valve is locked until the pilot burner flame is established.	(1) It is to be so arranged that the gas fuel is not supplied to the burners until the flame of a pilot burner for the gas fuel ignition is established and secured. Where gas fuel supply is initiated manually, it is to be so arranged that the gas fuel supply is cut off automatically when the gas fuel supply valve is opened before the flame of a pilot burner is established, or the gas fuel supply valve is locked until the pilot burner flame is established.	
(2) The control system regulating the oil/gas supply ratio is to be capable of maintaining combustion for the full range of loads approved for mixed burning taking into account of sufficient supplies of combustion air.	(2) The control system regulating the oil/gas supply ratio is to be capable of maintaining combustion for the full range of loads approved for mixed burning taking into account of sufficient supplies of combustion air.	
(3) Combustion air supplies for gas burning or oil/gas burning are to be controlled to automatically control to secure safe combustion within the combustible range.	(3) Combustion air supplies for gas burning or oil/gas burning are to be controlled to automatically control to secure safe combustion within the combustible range.	
(4) Combustion chambers of DF boilers are to be capable of automatic purging with a sufficient	(4) Combustion chambers of DF boilers are to be capable of automatic purging with a sufficient	

Amended	Original	Remarks
volume of air before igniting the base burners and after extinction of all burners. Arrangements are to be made to enable the boilers are manually purged and to have the satisfaction of the Society. (5) In the case of a gas fuel supply rate control system, it is to be so arranged that the gas fuel supply rate is secured not to be reduced less than predetermined minimum supply rate which is verified by a test in advance. **Annex 2A GUIDANCE FOR GAS COMBUSTION UNITS** **Chapter 2 CONSTRUCTION AND EQUIPMENT OF *GCU*** **2.3 Burners** (For reference) **4** Gas fuel burners are to be so arranged that they can be ignited individually only by flames of oil fuel burners. In such cases, oil fuel burners are to be large enough to instantly ignite the gas fuel at any nozzle of gas fuel burners. In the case of direct ignition type gas fuel burners specified in **3.2**, this requirement may be dispensed with.	volume of air before igniting the base burners and after extinction of all burners. Arrangements are to be made to enable the boilers are manually purged and to have the satisfaction of the Society. (5) In the case of a gas fuel supply rate control system, it is to be so arranged that the gas fuel supply rate is secured not to be reduced less than predetermined minimum supply rate which is verified by a test in advance. **Annex 2A GUIDANCE FOR GAS COMBUSTION UNITS** **Chapter 2 CONSTRUCTION AND EQUIPMENT OF *GCU*** **2.3 Burners** (For reference) **4** Gas fuel burners are to be so arranged that they can be ignited individually only by flames of oil fuel burners. In such cases, oil fuel burners are to be large enough to instantly ignite the gas fuel at any nozzle of gas fuel burners. In the case of direct ignition type gas fuel burners specified in **3.2**, this requirement may be dispensed with.	No amendment This chapter already includes direct ignition type
The effective date of the amendment is according to EFFECTIVE DATE AND APPLICATION (B)		

Amended-Original Requirements Comparison Table
(Recent Amendments to the IGC Code (MSC.566(109)) and Review of Existing Requirements (Machinery Related))

Amended	Original	Remarks
EFFECTIVE DATE AND APPLICATION (A) **1.** The effective date of the amendments is 1 July 2026. EFFECTIVE DATE AND APPLICATION (B) **1.** The effective date of the amendments is 1 January 2026.		