

Subject:

Amendments to the IGC/GC codes for existing gas carriers of non-Japanese flag

ClassNK

Technical Information

No. TEC-0463

Date 25 June 2002

To whom it may concern

Amendments to the IGC/GC Codes will become effective on 1 July 2002. Please find attached the amendments adopted by the IMO for your reference. The amendments apply to new gas carriers, but certain requirements also apply to existing gas carriers (i.e. the keels of which were laid before 1 July 2002). The outline of the requirements applicable to existing gas carriers is as follows:

a) Ship's cargo hoses/IGC Code 5.7.3, GC Code 5.4.3

For cargo hoses installed on board ships on or after 1 July 2002, prototype tests such as the pressure test under the provision of the amendments are required.

b) Pressure relief systems/IGC Code 8.2.7

In addition to the changing of the setting pressure, also the corresponding resetting of the high pressure alarms, carried out under the supervision of the master in accordance with the procedures approved by the administration and specified in the ship's operation manual, is required.

Concerning this amendment, a standard for the additional item that should be included in onboard operations manuals is shown in attachment 2. Please attach this attachment to the onboard operations manual, write this sentence into the onboard operations manual, or draw up a revised operations manual in which sentences of the same meaning are included.

c) Inert gas production on board/IGC Code 9.5.3

When the inert gas system is not in use, separation between the inert gas system and the cargo system in the cargo area (except for connections to the hold spaces or interbarrier spaces) is required.

Examples of separation of the IGG system on existing gas carriers are shown in the Attachment 3.

Concerning the detailed requirements of these amendments, please refer to Attachment 1.

According to the above requirements of b), c) that enter into force on 1 July 2002, it is necessary to reset the setting point of the high pressure alarms and to separate the IGG system from the cargo systems in the cargo area except for connections to the hold spaces or interbarrier space when the IGG system is not in use. (If the installation of the spool pieces is difficult by the above date, the installation of blank flanges after removing the stop valve is acceptable as a temporary measure)

(To be continued)

NOTES:

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At the time of the next periodical survey held on or after 1 July 2002, the Society will check compliance with the requirements as set out in b) and c) above. Even before 1 July 2002, the Society will carry out surveys for compliance at the request of shipowners.

Correction and re-issuance of the “CERTIFICATE OF FITNESS FOR CARRIEAGE OF LIQUIFIED GASES IN BULK (COF)” subject to IGC/GC Codes.

As it is stated in the COF which amendments are complied with, correction of each certificate is necessary as follows:

Certificate	Before correction	After correction
COF(IGC)	MSC32(63) and MSC 59(67)	MSC 103(73)
COF(GC)	(Including First to Fourth sets of Amendments) and MSC 34(63) and MSC 60(67)	(Including First to Fourth sets of Amendments) and MSC 107(73)

The procedure for correction and/or re-issuance of the COF is as follows:

- 1) In cases where an existing gas carrier needs to comply with the requirements as set out in b) and c) above.

At the time of periodical survey, the Society will check compliance with the requirements as set out in b) and c) above. At the time of the periodical survey (excluding special surveys), the attending surveyor will make these corrections to the certificate after checking compliance. If at a special survey, the Society will re-issue a corrected certificate.

- 2) In cases where an existing gas carrier does not need to comply with the requirements as set out in b) and c) above. (eg. the setting point of the pressure relief valve on the cargo tank is one point, relating to the above b), or an IGG system is not installed outside of the cargo area, relating to the above c).

If the existing gas carrier meets the amendments as it is, because there are no substantial requirements relating to its construction and equipment, in this case, it is not necessary to check compliance with the requirements. The procedure for correction and re-issuance of the COF is the same as in the above 1).

Please note that the Head Office of the Society can re-issue a new certificate for one that has been amended upon application from the shipowners, however a fee will be charge. The Society can conduct the said correction and re-issuance even before 1 July 2002.

(To be continued)

For any questions about the above, please contact:

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Attachment:

1. The detailed requirements of this amendment
2. The resetting procedure for the high pressure alarms that should be included in onboard operation manuals.
3. Examples of the separation of IGG systems on existing gas carriers
4. Amendments to IGC/GC Codes adopted by the IMO (Resolution MSC103(73), MSC107(73))

Attachment 1 to
ClassNK Technical Information No. TEC-0463

The detailed requirements of the amendments

I) Prototype Test for Ship's Cargo Hoses/IGC Code 5.7.3, GC Code 5.4.3

For cargo hoses installed on board ships on or after 1 July 2002, each new type of cargo hose, complete with end-fittings, should be prototype-tested at a normal ambient temperature with 200 pressure cycles from zero to at least twice the specified maximum working pressure. After this cycle pressure test has been carried out, the prototype test should demonstrate a bursting pressure of at least 5 times its specified maximum working pressure at the extreme service temperature. Hoses used for prototype testing should not be used for cargo service. Therefore, before being placed in service, each new length of cargo hose produced should be hydrostatically tested at ambient temperature to a pressure not less than 1.5 times its specified maximum working pressure but not more than two-fifths of its bursting pressure. The hose should be stencilled or otherwise marked with the date of testing, its specified maximum working pressure and, if used in services other than the ambient temperature services, its maximum and minimum service temperature, as applicable. The specified maximum working pressure should not be less than 10 bar gauge.

II) Procedure for Changing of Set Pressure/IGC Code 8.2.7

The changing of the set pressure under the provisions of 8.2.6 of the IGC Code, and the corresponding resetting of the alarms referred to in 13.4.1 of the IGC Code, should be carried out under the supervision of the master in accordance with procedures approved by the Administration and specified in the ship's operations manual.

III) Isolation of IGG System/IGC Code 9.5.3

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.

Attachment 2 to
ClassNK Technical Information No. TEC-0463

The resetting procedure for the high pressure alarms that should be included in onboard operation manual

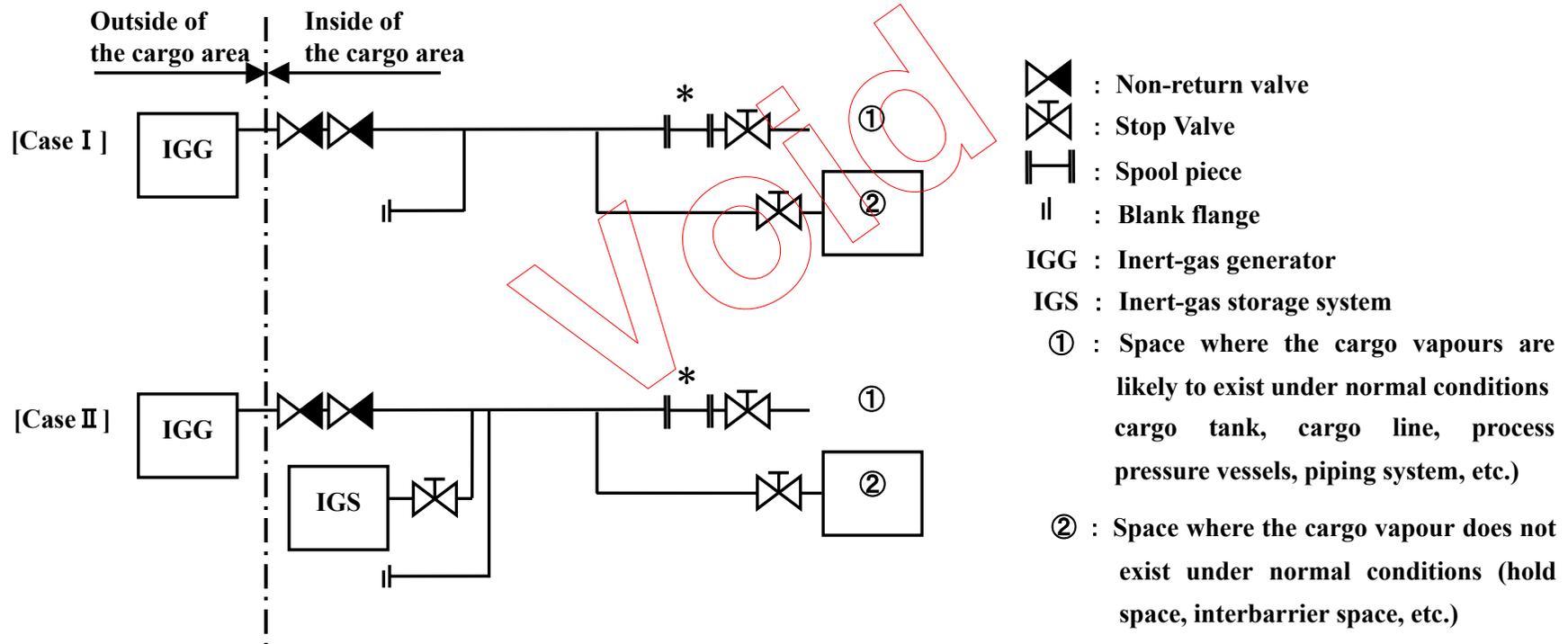
Procedure of changing of set pressure and resetting of high pressure alarms:

The changing of the set pressure under the provisions of 8.2.6 of IGC Code, and the corresponding resetting of the alarms referred to in 13.4.1 of IGC Code, are to be carried out under the supervision of the master in accordance with the onboard instruction manual for the equipment. The above changes are to be recorded in the ship's log and a sign posted in the cargo control room, if provided, and at each relief valve, stating the set pressure.

VOID

Attachment 3 to
ClassNK Technical Information No. TEC-0463

Examples of the separation of IGG systems on existing gas carriers



Note) *: If the installation of the spool pieces is difficult by 1 July 2002, the installation of blank flanges after removing one stop valve is acceptable as a temporary measure.

ANNEX 11**RESOLUTION MSC.103(73)
(adopted on 5 December 2000)****ADOPTION OF AMENDMENTS TO THE INTERNATIONAL CODE FOR THE
CONSTRUCTION AND EQUIPMENT OF SHIPS CARRYING LIQUEFIED
GASES IN BULK (IGC CODE)**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO resolution MSC.5(48) by which it adopted the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code),

RECALLING FURTHER article VIII(b) and regulation VII/11.1 of the International Convention for the Safety of Life at Sea (SOLAS), 1974 (hereinafter referred to as "the Convention") concerning the procedure for amending the IGC Code,

BEING DESIROUS of keeping the IGC Code up to date,

HAVING CONSIDERED, at its seventy-third session, amendments to the IGC Code proposed and circulated in accordance with article VIII(b)(i) of the Convention,

1. ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the IGC Code, the text of which is set out in the Annex to the present resolution;
2. DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the amendments shall be deemed to have been accepted on 1 January 2002, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet, have notified their objections to the amendments;
3. INVITES Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 July 2002 upon their acceptance in accordance with paragraph 2 above;
4. REQUESTS the Secretary-General, in conformity with article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Contracting Governments to the Convention;
5. FURTHER REQUESTS the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Contracting Governments to the Convention.

ANNEX

AMENDMENTS TO THE INTERNATIONAL CODE FOR THE CONSTRUCTION AND EQUIPMENT OF SHIPS CARRYING LIQUEFIED GASES IN BULK (IGC CODE)

CHAPTER 3

SHIP ARRANGEMENTS

- 1 The following text is inserted after the title of paragraph 3.7:

“(Paragraph 3.7.2.2 applies to ships constructed on or after 1 July 2002)”

- 2 The existing text of paragraph 3.7.2 is replaced by the following:

"3.7.2.1 The hold or interbarrier spaces of Type A independent tank ships should be provided with a drainage system suitable for handling liquid cargo in the event of cargo tank leakage or rupture. Such arrangements should provide for the return of any cargo leakage to the liquid cargo piping.

3.7.2.2 Arrangements referred to in 3.7.2.1 should be provided with a removable spool piece.”

- 3 The existing text of paragraph 3.7.4 is replaced by the following:

"3.7.4 Ballast spaces, including wet duct keels used as ballast piping, fuel-oil tanks and gas-safe spaces may be connected to pumps in the machinery spaces. Dry duct keels with ballast piping passing through, may be connected to pumps in the machinery spaces, provided the connections are led directly to the pumps and the discharge from the pumps lead directly overboard with no valves or manifolds in either line which could connect the line from the duct keel to lines serving gas-safe spaces. Pump vents should not be open to machinery spaces."

CHAPTER 4

CARGO CONTAINMENT

- 4 The third sentence of paragraph 4.8.3 is replaced by the following:

"For structural members connecting inner and outer hulls, the mean temperature may be taken for determining the steel grade."

- 5 The first sentence of paragraph 4.10.10.3.7 is replaced by the following:

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

CHAPTER 5

PROCESS PRESSURE VESSELS AND LIQUID, VAPOUR, AND PRESSURE PIPING SYSTEMS

6 The following text is inserted after the title of paragraph 5.6:

“(Paragraph 5.6.5 applies to ships constructed on or after 1 July 2002)”

7 A new paragraph 5.6.5 is inserted after existing paragraph 5.6.4:

“5.6.5 The closure time of 30 s for the emergency shutdown valve referred to in 5.6.4 should be measured from the time of manual or automatic initiation to final closure. This is called the total shutdown time and is made up of a signal response time and a valve closure time. The valve closure time should be such as to avoid surge pressure in pipelines. Such valves should close in such a manner as to cut off the flows smoothly.”

8 Existing paragraph 5.6.5 is renumbered as paragraph 5.6.6.

5.7 Ship's cargo hoses

9 Existing paragraph 5.7.3 is replaced by the following:

"5.7.3 For cargo hoses installed on board ships on or after 1 July 2002, each new type of cargo hose, complete with end-fittings, should be prototype-tested at a normal ambient temperature with 200 pressure cycles from zero to at least twice the specified maximum working pressure. After this cycle pressure test has been carried out, the prototype test should demonstrate a bursting pressure of at least 5 times its specified maximum working pressure at the extreme service temperature. Hoses used for prototype testing should not be used for cargo service. Thereafter, before being placed in service, each new length of cargo hose produced should be hydrostatically tested at ambient temperature to a pressure not less than 1.5 times its specified maximum working pressure but not more than two-fifths of its bursting pressure. The hose should be stencilled or otherwise marked with the date of testing, its specified maximum working pressure and, if used in services other than the ambient temperature services, its maximum and minimum service temperature, as applicable. The specified maximum working pressure should not be less than 10 bar gauge."

CHAPTER 8

CARGO TANK VENT SYSTEMS

10 The existing text of the first sentence of paragraph 8.2.7 is replaced by the following:

"The changing of the set pressure under the provisions of 8.2.6, and the corresponding resetting of the alarms referred to in 13.4.1, should 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."

CHAPTER 9

ENVIRONMENTAL CONTROL

- 11 The following sentence is added at the end of paragraph 9.5.3:

"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."

CHAPTER 11

FIRE PROTECTION AND FIRE EXTINCTION

- 12 The second sentence of paragraph 11.2.4 is replaced by the following:

"All pipes, valves, nozzles and other fittings in the fire-fighting systems should be resistant to the effects of fire and to corrosion by water."

CHAPTER 13

INSTRUMENTATION (GAUGING, GAS DETECTION)

- 13 The last three sentences of paragraph 13.3.1 are replaced by the following:

"The emergency shutdown valve referred to in 5.6.1 and 5.6.3 may be used for this purpose. If another valve is used for this purpose, the same information as referred to in 5.6.4 should be available on board. During loading, whenever the use of these valves may possibly create a potential excess pressure surge in the loading system, the port State authority may agree to alternative arrangements such as limiting the loading rate, etc."

CHAPTER 14

PERSONNEL PROTECTION

- 14 Existing paragraph 14.3.2 is replaced by the following:

"14.3.2 The ship should have on board medical first-aid equipment, including oxygen resuscitation equipment and antidotes for cargoes to be carried, based on the guidelines developed by the Organization*."

* Reference is made to the Medical First Aid Guide for Use in Accidents Involving Dangerous Goods (MFAG), which provides advice on the treatment of casualties in accordance with the symptoms exhibited as well as equipment and antidotes that may be appropriate for treating the casualty."

CHAPTER 18

OPERATING REQUIREMENTS

- 15 Existing paragraph 18.3.3 is replaced by the following:

"18.3.3 Officers should be trained in emergency procedures to deal with conditions of leakage, spillage or fire involving the cargo, based on the guidelines developed by the Organization*, and a sufficient number of them should be instructed and trained in essential first aid for cargoes carried.

* Refer to the Medical First Aid Guide for Use in Accidents Involving Dangerous Goods (MFAG), which provides advice on the treatment of casualties in accordance with the symptoms exhibited as well as equipment and antidotes that may be appropriate for treating the casualty, and to the relevant provisions of the STCW Code, parts A and B."

- 16 In paragraph 18.9, the reference to paragraph 17.4.3 is added to the list of references.

ANNEX 15

RESOLUTION MSC.107(73)
(adopted on 5 December 2000)

**ADOPTION OF AMENDMENTS TO THE CODE FOR THE CONSTRUCTION AND
EQUIPMENT OF SHIPS CARRYING LIQUEFIED GASES IN BULK (GC CODE)**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO resolution A.328(IX), by which the Assembly, at its ninth session, adopted the Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (GC Code) and authorized the Committee to amend the GC Code as may be necessary,

NOTING resolution MSC.103(73), by which it adopted amendments to the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code),

HAVING CONSIDERED, at its seventy-third session, amendments to the GC Code proposed by the Sub-Committee on Bulk Liquids and Gases at its fourth session and approved by the Committee at its seventy-second session,

RECOGNIZING the need to bring the approved amendments to the GC Code into force on the date on which the corresponding amendments to the IGC Code enter into force,

1. ADOPTS amendments to the GC Code, the text of which is set out in the Annex to the present resolution;
2. DETERMINES that the said amendments should become effective on 1 July 2002 upon acceptance and entry into force of the corresponding amendments to the IGC Code adopted by resolution MSC.103(73).

ANNEX

**AMENDMENTS TO THE CODE FOR THE CONSTRUCTION AND EQUIPMENT
OF SHIPS CARRYING LIQUEFIED GASES IN BULK (GC CODE)**

**CHAPTER V
PROCESS PRESSURE VESSELS AND LIQUID, VAPOUR AND
PRESSURE PIPING SYSTEMS**

5.4 Ship's cargo hoses

- 1 The existing paragraph 5.4.3 is replaced by the following:

"5.4.3 For cargo hoses installed on board ships on or after 1 July 2002, each new type of cargo hose, complete with end-fittings, should be prototype-tested at a normal ambient temperature with 200 pressure cycles from zero to at least twice the specified maximum working pressure. After this cycle pressure test has been carried out, the prototype test should demonstrate a bursting pressure of at least 5 times its specified maximum working pressure at the extreme service temperature. Hoses used for prototype testing should not be used for cargo service. Thereafter, before being placed in service, each new length of cargo hose produced should be hydrostatically tested at ambient temperature to a pressure not less than 1.5 times its specified maximum working pressure, but not more than two-fifths of its bursting pressure. The hose should be stencilled or otherwise marked with the date of testing, its specified maximum working pressure and, if used in services other than the ambient temperature services, its maximum and minimum service temperature, as applicable. The specified maximum working pressure should not be less than 10 bar gauge."

**CHAPTER XIV
PERSONNEL PROTECTION**

- 2 The existing paragraph 14.9 is replaced by the following:

"14.9 The ship should have on board medical first-aid equipment, including oxygen resuscitation equipment and antidotes for cargoes to be carried, based on the guidelines developed by the Organization*.

* Reference is made to the Medical First Aid Guide for Use in Accidents Involving Dangerous Goods (MFAG), which provides advice on the treatment of casualties in accordance with the symptoms exhibited as well as equipment and antidotes that may be appropriate for treating the casualty."

Chapter XVIII

Operating requirements

- 3 The existing paragraph 18.3.3 is replaced by the following:

"18.3.3 Officers should be trained in emergency procedures to deal with conditions of leakage, spillage or fire involving the cargo, based on the guidelines developed by the Organization*, and a sufficient number of them should be instructed and trained in essential first aid for cargoes carried.

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- * Refer to the Medical First Aid Guide for Use in Accidents Involving Dangerous Goods (MFAG), which provides advice on the treatment of casualties in accordance with the symptoms exhibited as well as equipment and antidotes that may be appropriate for treating the casualty, and to the relevant provisions of the STCW Code, parts A and B."