

標題:

日本籍以外の現存ガスキャリアーに対する
IGC/GC-Code 改正の件

ClassNK

テクニカル インフォメーション

No. TEC-0463

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各位

ガスキャリアーに適用される IGC/GC コードの改正が今年 7 月 1 日に発効いたします。これらの改正は、新造ガスキャリアーに対して適用されますが、その一部は現存ガスキャリアー(2002 年 7 月 1 日以前に起工されたガスキャリアー)に対しても適用されます。現存ガスキャリアーに関する改正の概要は次のとおりです。また、ご参考として IMO で採択された改正を添付いたします。

a) 貨物ホース/IGC-Code 5.7.3, GC-Code 5.4.3

2002 年 7 月 1 日以降船上に搭載される貨物ホースについては、圧力テスト等改正要件に基づくプロトタイプテストが要求されます。

b) 貨物通気装置/IGC-Code 8.2.7

設定圧力の変更に加え、圧力警報装置の設定変更も船長の立ち会いのもと主管庁に承認されたオペレーションマニュアルに従って行うことが要求されます。

本改正要件に関しまして、標準的なオペレーションマニュアルへの追記事項を添付資料 2 に記載いたしますので、本船のオペレーションマニュアルに添付、追記、または同様の内容の文章を含んだ改正マニュアルを作成していただきますようお願いいたします。

c) イナーポートガス製造設備/IGC-Code 9.5.3

使用されないときはホールドスペース又はインターバリアスペースへの接続を除いた貨物エリア内の貨物装置から分離されることが要求されます。上記分離要件に適合する配置図例に関しましては、添付資料 3 をご参照願います。

上記改正要件の詳細に関しましては添付資料 1 をご参照願います。

つきましては、7 月 1 日以降、即日適用要件の上記 b), c) に従って圧力警報装置の設定圧力変更操作、及び IGG の未使用時の隔離操作(スプールピース設置が困難な場合は仮措置として止め弁を取り外して盲板を設置)を行う等の処置が必要となりますのでお知らせいたします。

また、弊会では、7 月 1 日以降実施される定期的検査時に本船が上記 b), c) に適合していることの確認を行います。また、7 月 1 日以前であっても、申請していただければ適合のための検査を実施いたします。

(次頁に続く)

NOTES:

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IGC/GC コードに従う“液化ガスのばら積運送に関する適合証書(COF)”の訂正および再発行

適合証書には本船がどの改正に適合しているかが記載されていますので、今回の改正に適合していることを示すために関連個所を次のように訂正する必要があります。

証書	訂正前	訂正後
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)

適合証書訂正及び再発行手順は以下の通りです。

1) 前 b), c)が適用される船舶の場合

定期的検査時に前 b), c)の適合に関し現場確認を行います。同検査時(定期検査を除く)には、記載変更に伴う証書の加筆訂正を立会検査員が行います。尚、定期検査時には、上表の改正番号を含んだ証書の更新発行を行います。

2) 前 b),c)が適用されない場合、即ち、前 b)に関しましては、貨物タンク圧力逃し弁の設定圧力値が1つである船舶、前 c)に関しましては、貨物エリア外に IGG を設置していない船舶)

他に構造設備に関わる実質的な要件がないため、現状のままで今回の改正に適合しております。この場合に関しましては、現場確認の必要はございません。
証書の記載事項変更に関しましては、上記 1)と同様の手順にて行います。

また、立会検査員により加筆訂正されました証書に関しましては、本会船級部におきまして、更新発行を受け付けておりますので、申請していただければ、規定の証書書き換え手数料を頂いた上で証書を発行いたします。なお、この訂正および再発行は7月1日以前でも行います。

なお、本件に関してご不明な点は、以下の部署にお問い合わせください。

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添付:

1. 改正要件の詳細
2. オペレーションマニュアルに記載すべき圧力警報装置の設定変更手順
3. 現存ガスキャリアーの IGG 装置隔離の配置に関する例図
4. IMO から出された IGC/GC コードの改正(Resolution MSC103(73), MSC107(73))

ClassNK テクニカル インフォメーション
No. TEC-0463 添付 1

改正要件の詳細

I) 船舶の貨物ホースのプロトタイプテスト/IGC-Code 5.7.3, GC-Code 5.4.3

2002 年 7 月 1 日以降船舶に搭載される貨物ホースは、ホース端の装備品も完備した状態で、大気温度において 0 からその定格最大使用圧力の 2 倍以上の圧力範囲で 200 回の繰返し圧力によるプロトタイプテストを行ったものでなければならない。また、この繰返し圧力試験が行われた後、最も厳しい使用温度でその定格最大使用圧力の 5 倍以上の圧力でプロトタイプテストを行ったものでなければならない。プロトタイプテストに使用したホースは、貨物の荷役に使用してはならない。その後、製造された同型式の貨物ホースは、大気温度において定格最大使用圧力の 1.5 倍以上で、かつ、その破裂圧力の 5 分の 2 以下の圧力で水圧試験を行ったものでなければならない。ホースには、その試験日、定格最大使用圧力を、また、大気温度以外の使用温度で使用する場合には許容される最高及び最低使用温度を表示しなければならない。定格最大使用圧力は、1.0Mpa(ゲージ圧)未満としてはならない。

II) 圧力逃し弁及び圧力警報装置の設定変更手順/IGC-Code8.2.7

IGC-Code8.2.6 による設定圧力の変更及び IGC-Code13.4.1 による警報装置の設定変更は、主官庁によって承認され、かつ、船舶のオペレーションマニュアルに記載されている手順に従って船長の監督下で行うこと。

III) IGG 装置の隔離/IGC-Code9.5.3

イナートガス装置は、使用されない時にはホールドスペース又はインターバリアスペースへの接続を除いた貨物エリア内の貨物装置から分離しなければならない。

ClassNK テクニカル インフォメーション
No. TEC-0463 添付 2

オペレーションマニュアルに記載すべき圧力警報装置の設定変更手順

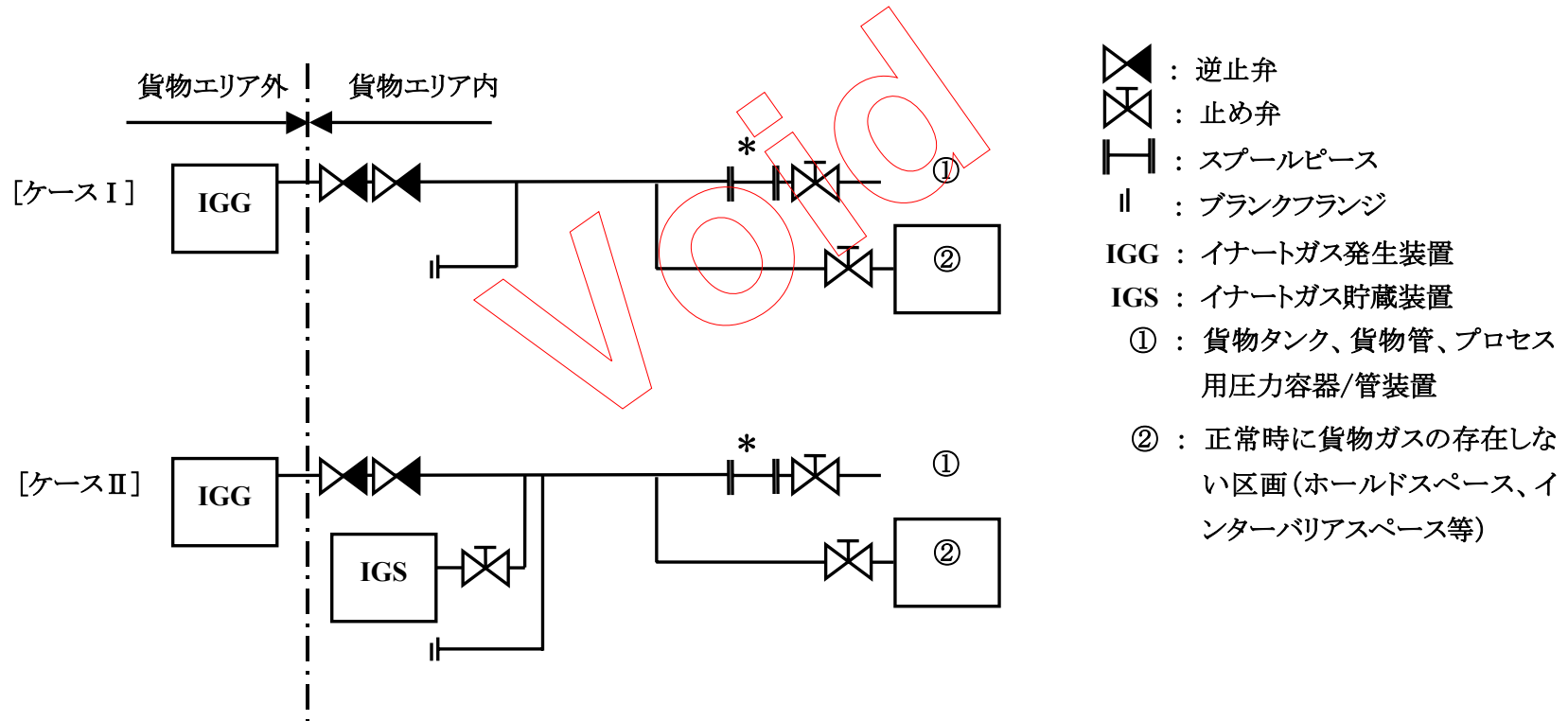
圧力逃し弁設定圧力及び圧力警報装置の設定変更手順

IGC Code 8.2.6 による設定圧力の変更及び IGC Code 13.4.1 による警報装置の設定変更は、本船に備え付けられている機器取り扱い説明書に従って船長の監督下で行わなければならない。この変更は、船舶の航海日誌に記録し、さらに、貨物コントロール室を設ける場合には、室内の標識に提示し、かつ、各逃し弁の位置にもその設定値とともに表示すること。

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ClassNK テクニカル インフォメーション
No. TEC-0463 添付 3

現存ガスキャリアーの IGG 装置隔離の配置に関する例図



注) *: 仮措置として現在装備されている 2 個の止め弁のうち 1 つを取り外し、盲板を取りつける事による対応でも可

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.

- * 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."

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