

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)

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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."

## **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."

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

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