

Subject :

**Exemption of Requirement of Damage
stability in existing bulk carriers**

NKTECHNICAL INFORMATION

No. : 296

Date : 25 December 1998

To shipowners and shipbuilders concerned

As informed by ClassNK Technical Information No.234 (1 November 1997), the structural and damage stability requirements provided in SOLAS amendments and IACS Unified Requirements for the purpose of further "Bulk Carrier Safety", have been incorporated into our Rules and come into force.

In these requirements, new SOLAS Chapter XII Reg. 9 stipulates that existing bulk carriers, such as a ships having 4 holds or a self-unloader ships, which are not capable of complying with the damage stability requirements provided in Reg. 4.2 due to being constructed without an sufficient number of trans. watertight bulkheads, are exempted from the structural and damage stability requirements under the condition that the following appropriate measures are taken with flag state's approval.

- (1) Internal examination, Close-up survey and Thickness measurements required at Intermediate Survey are to be carried out for foremost cargo hold at Annual Survey.
- (2) The ship is to be provided with bilge well high level alarms in all cargo holds, or in conveyor tunnels, as appropriate, giving an audible and visible alarm on navigation bridge.
- (3) The ship is provided with detailed information on specific cargo hold flooding scenarios.

Moreover, IACS has decided that the ships to which the above-mentioned SOLAS Chapter XII Reg. 9 applies are to be provided with the water ingress detecting system in all cargo holds in addition to the bilge well high water level alarms as specified in the preceding (2). The system is to be able to detect without delay the presence of water in the cargo holds in excess of the small amounts which may be normally expected in the bilge wells, and the means of the water ingress detecting are as follows:

- (a) The presence of water is detected by physical contact of the water with measuring device.
- (b) In addition to bilge well high level alarm required in the proceeding (2), the water ingress detectors are to be arranged to detect water when it reaches a level 2 metres above the inner bottom, giving an audible and visible alarm on navigation bridge or permanently manned spaces. And the cargo holds affected are to be identifiable.
- (c) A water ingress detector is to be fitted in the aft part of each cargo hold or in cargo conveyor tunnel, as appropriate. Sensors are placed in tube or similar protected locations to protect them from mechanical damage and to isolate them from the cargo.

We have incorporated these requirements into Chapter 31B "Additional Requirements for Existing Bulk Carrier", Part C of the Rules which came into force on 1st July, 1998. (Please refer to attachment)

If you have any question in this regard, please contact Survey Department (Fax: 81-3-5226-2029).

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“Rules for the Survey and Construction of Steel Ships” has been partly amended as follows:

Chapter 31B ADDITIONAL REQUIREMENTS FOR EXSITING BULK CARRIERS

31B.2 Damage Stability

31B.2.1 Survivability

Sub-paragraph -2 has been amended as follows

-2 For ships not being capable of complying with the requirements in **31A.2.1-2.** , the measures as deemed appropriate by the Society are to be taken. The requirements specified in **31B.3** and **31B.4** may not apply to the ships which are subject to this requirement.

EFFECTIVE DATE AND APPLICATION

1. The effective date of these amendments is 1st January 1999.

“Guidance for the Survey and Construction of Steel Ships” has been partly amended as follows:

C31B ADDITIONAL REQUIREMENTS FOR EXSITING BULK CARRIERS

C31B.2 Damage Stability

C31B.2.1 Survivability

Subparagraph -2 has been newly added as follows;

-2 “ The measures as deemed by the Society” as referred to in **31B2.1-2, Part C of the Rules**, are specified in the followings:

- (1) Foremost cargo hold is examined in accordance with the requirements of **4.2.4, 4.2.5 and 4.2.6, Part B of the Rules**, at Annual Survey specified in **Chapter 3, Part B of the Rules**.
- (2) The ship is provided with bilge well high water level alarms in all cargo holds, or in cargo conveyor tunnels, as appropriate, giving an audible and visible alarm on navigation bridge according to the following (a) through (e). An interlocking device may be installed in the water detection system for floodable cargo hold.
 - (a) They are detected by physical contact of the water with measuring device.
 - (b) In the cargo holds loaded with flammable and explosive cargo, detectors are of explosion-proof type.
 - (c) Sensors are placed in tubes or similarly protected locations to protect them from mechanical damage and to isolate them from the cargo.
 - (d) Electric power is supplied from the main source and the emergency source or reserve source.
 - (e) Alarm system is provided with audible and visible electrical power failure alarm.
- (3) The ship is provided with detailed information on specific cargo hold flooding scenarios. This information is accompanied by detailed instructions on evacuation preparedness and is used as the basis for crew training and drills.
- (4) The ship is provided with detectors of water ingress detecting the presence of water in the cargo holds in excess of the small amounts which may be normally expected in the bilge well in addition to the bilge well high water level alarms as required in the preceding (2), according to the following (a) through (f). An interlocking device may be installed in the water detection system for the floodable cargo hold.
 - (a) The presence of water is detected by physical contact of the water with the measuring device.
 - (b) Water ingress detectors are to be arranged to detect water when it reaches a level of 2 metres above the inner bottom, giving an audible and visible alarms on navigation bridge or a permanently manned space. When the alarm is actuated, the cargo hold affected is to be identifiable.

- (c) A water ingress detector is to be fitted in the aft part of each cargo hold or in cargo conveyor tunnel, as appropriate. Sensors are placed in tubes or similar protected locations to protect them from mechanical damage and to isolate them from the cargo.
- (d) In cargo holds loaded with flammable and explosive cargo, detectors are to be of explosion-proof type.
- (e) Electric power is supplied from main source and the emergency source or reserve source.
- (f) Alarm system is provided with audible and visible electrical power failure alarm.

EFFECTIVE DATE AND APPLICATION

1. The effective date of these amendments is 1st January 1999.

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