

Subject

Bulk Carrier Safety (Updated version of ClassNK  
Technical Information No. TEC-0507)


# **ClassNK**

## **Technical Information**

No. TEC-0538  
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To whom it may concern

In IMO Maritime Safety Committee at its 77th session (MSC77) and IACS at its 47th Council meeting (C47) held in June 2003, the issues of bulk carrier safety have been discussed and some of them were concluded. This ClassNK Technical Information is the updated version of ClassNK Technical Information No. TEC-0507 "Bulk Carrier Safety" including the outcomes of MSC77 and C47.

Shade  in tables of the attachments shows the revised or newly added items to ClassNK Technical Information No. TEC-0507. Please see the reference TEC-No. in the attached tables if detail information is needed.

The previous ClassNK Technical Information No. TEC-0507 has been superseded.

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Attachment: Table - Bulk Carrier Safety Measures

**Table - Bulk Carrier Safety Measures (IACS' 8 initiatives & Outcomes of IMO MSC77)**

- No. 1-8 IACS : 8 initiatives (ClassNK Technical Information No. TEC-0451)  
 No. 9-16 IMO : Amendments to SOLAS/LL (ClassNK Technical Information No. TEC-0498 and TEC-0532)  
 No. 17-18 IACS : Outcome of SC/BCS(Steering Committee / Bulk Carrier Safety) and C47(Council at its 47<sup>th</sup> session) (ClassNK Technical Information No. TEC-0535)

**(IACS- 8 initiatives)**

(X: applicable, NA: withdrawal, -: not applicable, [X]: in progress)

No.	Measures	Content	New Ships	Existing Ships	Application timetable
1	Earlier implementation of SOLAS Chapter XII requirements	This brings forward the reinforcement of the corrugated transverse bulkhead between No.1/2 holds and the double bottom of No. 1 hold.	-	X (UR S23(Rev.3.1)) Information has been already sent to the subject vessels' managers, where applicable. (See 'Survey Status')	From 1 July 2003
2	Amendment of the Enhanced Survey Programme (ESP) requirements for close-up surveys in the 10-15 years age range	This increases requirements for close-up surveys at SS No.2 and also requires subsequent IS to apply the full scope of SS No.2.	-	X (UR Z10.2(Rev.13)) NK rules have been already amended.	SS or IS after 1 January 2003
3	Installation of water ingress alarms in all cargo holds	The objective is to require the installation of water ingress/level detection and alarm systems in all cargo holds.	NA	Follow the requirements of the SOLAS amendment (see item 9)	See item 9
4	More protection for forward hatches and fore deck fittings, by the means of an improved bulwark or breakwater on existing vessels and a forecastle on new vessels	Installation of a forecastle on new vessels Installation of an improved bulwark or breakwater on existing bulk carriers when not fitted with a forecastle	X (UR S28) S28 was adopted in May 2003.	- Withdrawal	Ships contracted for construction on or after 1 January 2004 -

(X: applicable, NA: withdrawal, -: not applicable, [X]: in progress)

## (IACS- 8 initiatives)

No.	Measures	Content	New Ships	Existing Ships	Application timetable
5	Requirements to increase the integrity of fore-deck fittings, to resist green water loading	(UR S27) Improving the requirements for the strength of air-pipes, ventilators  (UR S26) Improving the requirements for the strength of and securing of small hatches	X          X	X          -	(New Ships) Ships contracted for construction on or after 1 January 2004  (Existing Ships) Ships contracted for construction prior to 1 January 2004 Age>=15 on 1 January 2004 →by 1st IS or SS after 1 January 2004  Age>=10 on 1 January 2004 →by 1st SS after 1 January 2004 Age<10 on 1 January 2004 →by reaching 10 years of age after 1 January 2004  (New Ships) Ships contracted for construction on or after 1 January 2004
6	Strengthening of Hatch covers & Hatch coaming	Improving the requirements for securing of windlass mounts  Strengthening of all hatch covers and hatch coamings in Position I  Improving of hatch cover closing arrangements such as securing devices and stoppers  Improving of hatch cover closing arrangements such as securing devices and stoppers	X          -	-          X	(New Ships) Ships contracted for construction on or after 1 January 2004  (New Ship) Ships contracted for construction on or after 1 January 2004  (New Ships) Ships contracted for construction on or after 1 January 2004  (Existing Ships) Ships contracted for construction prior to 1 January 2004 Age>=15 on 1 January 2004 →by 1st IS or SS after 1 January 2004  Age>=10 on 1 January 2004 →by 1st SS after 1 January 2004 Age<10 on 1 January 2004 →by reaching 10 years of age after 1 January 2004

(IACS- 8 initiatives)

(X: applicable, NA: withdrawal, -: not applicable, [X]: in progress)

No.	Measures	Content	New Ships	Existing Ships	Application timetable
7	Strengthening of hold frames	<p>Implementation of requirements for the strength of side shell frames of existing vessels taking into consideration IACS UR S12 (which is applicable only for side frames of new bulk carriers).</p> <p>Revision of S12(rev.3) for new vessels</p>	[X] (Under consideration)	X	<p>(New Ships) [Ships contracted for construction on or after 1 January 2004]</p> <p>(Existing Ships) Ships contracted for construction prior to 1 January 2004 Age<math>\geq</math>15 on 1 January 2004 →by 1st IS or SS after 1 January 2004 Age<math>\geq</math>10 on 1 January 2004 →by 1st SS after 1 January 2004 Age<math>&lt;</math>10 on 1 January 2004 →by reaching 10 years of age after 1 January 2004</p>
8	Fitting of water ingress alarms for spaces forward of the cargo area.	The objective is to require the installation of water ingress detection and alarm systems.	NA	NA	Follow the requirements of the SOLAS amendment (See item 9)

(IMO) (X: applicable, NA: withdrawal, -: not applicable, [X]: in progress)

No.	Measures	Content	New Ship	Existing Ship	Application scheme
9	Installation of Water ingress alarms for cargo holds, forward spaces & ballast tanks	Amendments to SOLAS regulation XII/12, 13 have been adopted and the following equipment will be required to be installed. 1) Water ingress alarms in each cargo hold 2) Water ingress alarms in any ballast tank forward of the collision bulkhead 3) Water ingress alarms in any dry or void space which extends forward of the fore most cargo hold 4) Pumping system in ballast tanks & dry spaces which are located forward of the collision bulkhead	X	X (SOLAS XII/12)  Definition of 'Bulk Carrier' is in accordance with SOLAS requirements (Chap IX/1.6)  Performance standards for water level detectors were adopted at MSC77. (See TEC-0532.) (SOLAS XII/13)	(New Ships) Ships constructed on or after 1 July 2004  (Existing Ships) Ships constructed prior to 1 July 2004 items 1) to 3) →by first AS, IS or SS after 1 July 2004 item 4) →by first IS or SS after 1 July 2004  See TEC-0498.
10	Amendment to the International Load Line Convention	For example, 1) Revision of Hatch cover design loads 2) Keeping the forward reserve buoyancy within 0.15L, etc.	X	-  Amendment was adopted at MSC77. (See TEC-0532)	(New Ships) Ships constructed on or after 1 January 2005
11	Means of access for tankers and for bulk carriers	Means of access for maintenance & inspection should be provided in the cargo holds, cargo tanks or ballast tanks.	X	-  (SOLAS II-1/3-6) New oil tankers of 500 GT and more New bulk carriers of 20,000 GT and more (SOLAS III/32)	(New Ships) Ships constructed on or after 1 January 2005
12	Carriage requirement of immersion suits	Cargo ships regardless of construction date will be required to provide with immersion suits for every person onboard. However, for ships other than bulk carriers, those immersion suits need not required if the ship constantly engaged on voyages in warm climates where, in the opinion of the Administration, immersion suits are unnecessary.	[X]	[X] (SOLAS III/32)	(New Ships) Ships constructed on or after [1 January 2006]  (Existing Ships) Not later than first SE survey on or after [1 January 2006]  This draft amendment will be adopted at MSC78.  See TEC-0532.

(IMO) (X: applicable, NA: withdrawal, -: not applicable, [X]: in progress)

No.	Measures	Content	New Ship	Existing Ship	Application scheme
13	Review of definition of "bulk carriers"	The definition of "bulk carriers" in SOLAS XII will be amended.	[X]	-	These provisions were considered and agreed in principle at MSC77. Draft relevant amendments to SOLAS XII will be referred to DE47 for further consideration with a view to being approved at MSC78.(*)  See TEC-0532.
14	Double side skin	New bulk carriers [of length 150 m and over] will be required double side skin construction.	[X]	-	
15	Alternate hold loading ban	Bulk carriers in the full load condition (90% of the ship's deadweight at the relevant freeboard) will be banned from sailing with any hold empty.	-	[X]	(SOLAS XII) Single side skin bulk carriers - of length 150m and over, - not compliance with SOLAS XII/5 and IACS UR S12(Rev.2.1), and - after reaching 10 years of age  Not cost-effective for existing ships
16	Free-fall lifeboats with float-free capability	Bulk carriers as defined in SOLAS IX will be required to install a free-fall lifeboat with float-free capability onboard.	[X]	NA	The amendment to SOLAS III will be further considered at DE47 with a view to being approved at MSC78.

(\*) DE47 will be held in MARCH 2004. MSC78 will be held in MAY 2004.

(IACS) (X: applicable, NA: withdrawal, -: not applicable, [X]: in progress)

No.	Measures	Content	New Ship	Existing Ship	Application scheme
17	Harmonised Notations and corresponding Design Loading Condition	Unified requirements for harmonised notation of bulk carriers and harmonised design loading conditions have been established.	X (UR S25(Rev.1)) Bulk carriers of length 150 m or above	-	(New Ships) Bulk carriers contracted for construction on or after 1 July 2003  <i>Note: ClassNK will implement these URs to bulk carriers contracted for construction on 1 January 2004 on or after as a mandatory requirement. In the mean time, however, ClassNK recommend shipowners and shipbuilders to stipulate compliance with the requirements for bulk carriers in their contract for construction.</i>
18	Longitudinal Strength Standards	The requirements of partially filled ballast tanks in ballast loading condition have been added in longitudinal strength standards.	X (UR S11(Rev.3)) (UR S17(Rev.5)) S11(Rev.3) and S17(Rev.5) were adopted in June 2003. Bulk carriers of length 150 m or above	-	(See TEC-535) (New Ships) Ships other than bulk carriers contracted for construction on or after 1 July 2004.

IACS UR (URs can be obtained from the IACS website. / www.iacs.org.uk)

- UR S11(Rev.3) Longitudinal Strength Standard
- UR S17(Rev.5) Longitudinal Strength of Hull Girder in flooded condition for single side skin Bulk Carriers
- UR S21(Rev.3) Evaluation of Scantlings of Hatch Covers and Hatch Coamings of Bulk Carriers, Ore Carriers and Combination Carriers (Rev. 3)
- UR S25(Rev.1) Harmonized Notations and Corresponding Design Loading Conditions for Bulk Carrier
- UR S26 Strength and securing of small hatches on the exposed fore deck
- UR S27 Strength requirements for fore deck fittings and equipment
- UR S28 Requirements for the Fitting of a Forecastle for Bulk Carriers, Ore Carriers and Combination Carriers
- UR S30 Cargo Hatch cover Securing arrangements for Bulk Carriers not built in accordance with UR S21(rev.2)
- UR S31(Rev.1) Renewal criteria for side shell frames in single side skin Bulk Carriers not built in accordance with UR S12rev.1 or subsequent revisions

ClassNK Technical Information (Information can be obtained from ClassNK website. / www.classnk.or.jp)

TEC-0451 Eight measures taken by IACS for improving Bulk carrier safety

TEC-0468 Introduction of the outcomes of MSC75

TEC-0498 Introduction of the outcomes of MSC 76

TEC-0532 Introduction of the outcomes of MSC 77

TEC-0535 Implementation date of UR S25(Rev.1)