

**PART II RULES FOR THE CONSTRUCTION
 OF SHIPS IDENTIFIED BY THEIR
 MISSION**

TÍTULO 14 BULK CARRIERS

SECTION 6 PIPING

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CHAPTER A APPROACH

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A1. APPROACH

100. Piping Systems

101. This Part II, Title 14, Section 6 contains additional requirements to those of Part II, Title 11, Section 6 of the Rules.

CHAPTER F HULL PIPING

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- F1. HULL PIPING – BILGE SYSTEM
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F1. HULL PIPING – BILGE SYSTEMS

100. Application

101 to 104 – See Part II, Title 11, Section 6

105. The requirements of the present Chapter F1 apply to bulk carriers constructed generally with single deck, top-side tanks and hopper side tanks in cargo spaces intended primarily to carry dry cargo in bulk, and includes such types as ore carriers and combination carriers, which are contracted for construction on or after 1 January 2005.

200. Draining and pumping forward spaces in bulk carriers

201 to 212. – See Part II, Title 11, Section 6.

213. Dewatering capacity

214. The dewatering system for ballast tanks located forward of the collision bulkhead and for bilges of dry spaces any part of which extends forward of the foremost cargo hold #1 is to be designed to remove water from the forward spaces at a rate of not less than $320A\text{m}^3/\text{h}$, where A is the cross-sectional area in m^2 of the largest air pipe or ventilator pipe connected from the exposed deck to a closed forward space that is required to be dewatered by these arrangements.

300. Dewatering of forward spaces of bulk carriers [Resolution MSC 134(76) and IMO interpretation of SOLAS Regulation XII/13 (MSC/Circ.1069)]

301. *On bulk carriers, the means for draining and pumping ballast tanks forward of the collision bulkhead and bilges of dry spaces any part of which extends forward of the foremost cargo hold shall be capable of being brought into operation from a readily accessible enclosed space, the location of which is accessible from the navigation bridge or propulsion machinery control position without traversing exposed freeboard or superstructure decks. Where pipes serving such tanks or bilges pierce the collision bulkhead, valve operation by means of remotely operated actuators may be accepted, as an alternative to the valve control specified in PII,T11,S6.F1.501, provided that the location of such valve controls complies with this regulation.*

- a. The spaces where availability of pumping systems is required in accordance with PII,T11,S6. should be the same watertight spaces where water level detectors are required in accordance with paragraph 1.3 of SOLAS regulation XII/12.
- b. This means that paragraph 1 of regulation XII/13 does not apply to the enclosed spaces the volume of which does not exceed 0.1% of the ship's maximum displacement volume and to the chain locker.

302. RBNA's clients are to implement this topic and its referenced standards for equipment approval requests received on or after 1 October 2003. Equipment, for which equipment approval requests were received before 1 October 2003 and which may not fully comply with this topic and its referenced standards, may be installed until 31 December 2003 for compliance with SOLAS XII/12.

303. Refer to IMO MSC/Circ. 1176 (Rev.1 is to introduce a reference to IMO MSC/Circ. 1176 with no change of technical substance).

304. The "contracted for construction" date means the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. For further details regarding the date of "contract for construction", refer to IACS Procedural Requirement (PR) No. 29.

305. Where the piping arrangements for dewatering closed dry spaces are connected to the piping arrangements for the drainage of water ballast tanks, two non-return valves are to be provided to prevent the ingress of water into dry spaces from those intended for the carriage of water ballast. One of these non-return valves is to be fitted with shut-off isolation arrangement. The non-return valves are to be located in readily accessible positions. The shut-off isolation arrangement is to be capable of being controlled from the navigation bridge, the propulsion machinery control position or enclosed space which is readily accessible from the navigation bridge or the propulsion machinery control position without travelling exposed freeboard or

superstructure decks. In this context, a position which is accessible via an under deck passage, a pipe trunk or other similar means of access is not to be taken as being in the "readily accessible enclosed space".

306. Under this SOLAS regulation XII/13.1:

- a. the valve specified under *PII,T11,S6.F1.501*, is to be capable of being controlled from the navigation bridge, the propulsion machinery control position or enclosed space which is readily accessible from the navigation bridge or the propulsion machinery control position without travelling exposed freeboard or superstructure decks. In this context, a position which is accessible via an under deck passage, a pipe trunk or other similar means of access is not to be taken as being in the "readily accessible enclosed space";
- b. the valve is not to move from the demanded position in the case of failure of the control system power or actuator power;
- c. positive indication is to be provided at the remote control station to show that the valve is fully open or closed;
- d. local hand powered valve operation from above the freeboard deck as specified in SOLAS regulation II-1/12.5.1 is required. An acceptable alternative to such arrangement may be remotely operated actuators as specified in SOLAS regulation XII/13.1 on the condition that all provisions in 13.1 are met.

The dewatering arrangements are to be such that any accumulated water can be drained directly by a pump or eductor.

307. The dewatering arrangements are to be such that when they are in operation, other systems essential for the safety of the ship including fire fighting and bilge systems remain available and ready for immediate use. The systems for normal operation of electric power supplies, propulsion and steering are not to be affected by the operation of the dewatering systems. It must also be possible to immediately start fire pumps and have a ready available supply of fire-fighting water and to be able to configure and use bilge system for any compartment when the dewatering system is in operation.

308. Bilge wells are to be provided with gratings or strainers that will prevent blockage of the dewatering system with debris.

309. The enclosures of electrical equipment for the dewatering system installed in any of the forward dry spaces are to provide protection to IPX8 standard as defined in IEC Publication 60529 for a water head equal to the height of the space in which the electrical equipment is installed for a time duration of at least 24 hours.

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