

LL11 Scuppers, inlets and discharges

(1968)
(Rev.1
1990)
(Rev.2
1994)
(Rev.3
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Interpretation of Regulation 22(1) of the 1966 International Convention on Load Lines and of Regulation 22(1)(a) of the 1988 Protocol to the 1966 International Convention on Load Lines as amended by resolution MSC.143(77).

Regulation 22(1) of the 1966 International Convention on Load Lines reads as follows:

Discharges led through the shell either from spaces below the freeboard deck or from within superstructures and deckhouses on the freeboard deck fitted with doors complying with the requirements of Regulation 12 shall be fitted with efficient and accessible means for preventing water from passing inboard. Normally each separate discharge shall have one automatic non-return valve with a positive means of closing it from a position above the freeboard deck. Where, however, the vertical distance from the summer load waterline to the inboard end of the discharge pipe exceeds 0.01 L, the discharge may have two automatic non-return valves without positive means of closing, provided that the inboard valve is always accessible for examination under service conditions; where that vertical distance exceeds 0.02 L a single automatic non-return valve without positive means of closing may be accepted subject to the approval of the Administration. The means for operating the positive action valve shall be readily accessible and provided with an indicator showing whether the valve is open or closed.

Regulation 22(1)(a) of the 1988 Protocol to the 1966 International Convention on Load Lines as amended by resolution MSC.143(77) reads as follows:

(a) Discharges led through the shell either from spaces below the freeboard deck or from within superstructures and deckhouses on the freeboard deck fitted with doors complying with the requirements of regulation 12 shall, except as provided in paragraph (2), be fitted with efficient and accessible means for preventing water from passing inboard. Normally each separate discharge shall have one automatic non-return valve with a positive means of closing it from a position above the freeboard deck. Where the inboard end of the discharge pipe is located at least 0.01L above the Summer Load Line, the discharge may have two automatic non-return valves without positive means of closing. Where that vertical distance exceeds 0.02L, a single automatic non-return valve without positive means of closing may be accepted. The means for operating the positive action valve shall be readily accessible and provided with an indicator showing whether the valve is open or closed.

Footnote: This UI is also applicable to Regulation 22(1) of the 1988 Protocol. This UI is applicable to Regulation 22(1) of International Convention on Load Lines, 1966 and the 1988 Protocol. Paragraphs under subsection BB of this UI are also applicable to Regulation 22(1) of the 1988 Protocol as amended by resolution MSC.143(77).

Interpretations

AA. It is considered that an acceptable equivalent to one automatic non-return valve with a positive means of closing from a position above the freeboard deck would be one automatic non-return valve and one sluice valve controlled from above the freeboard deck.

Where two automatic non-return valves are required, the inboard valve must always be accessible under service condition, i.e., the inboard valve should be above the level of the tropical load water line. If this is not practicable, then, provided a locally controlled sluice valve is interposed between the two automatic non-return valves, the inboard valve need not to be fitted above the LWL.

Where sanitary discharges and scuppers lead overboard through the shell in way of machinery spaces, the fitting to shell of a locally operated positive closing valve, together with non-return valve inboard, is considered to provide protection equivalent to the requirements of Regulation 22(1).

It is considered that the requirements of Regulation 22(1) for non-return valves are applicable only to those discharges which remain open during the normal operation of a vessel. For discharges which must necessarily be closed at sea, such as gravity drains from topside ballast tanks, a single screw down valve operated from the deck is considered to provide efficient protection.

The inboard end of a gravity discharge which leads overboard from an enclosed superstructure or space is to be located above the water line formed by a 5 degree heel, to port or starboard, at a draft corresponding to the assigned summer freeboard.

It is considered that the position of the inboard end of discharges should be related to the timber summer load waterline when timber freeboard is assigned.

Refer to the attached Table for the acceptable arrangements of scuppers, ~~inlets~~, and discharges.

For garbage chutes it is considered that an acceptable equivalent to the non-return valve with a positive means of closing from a position above the freeboard deck would be two gate valves controlled from the working deck of the chute. The lowest gate valve should, in addition, be controlled from a position above the freeboard deck. An interlock system between the two valves should be arranged.

It is recommended that the inboard end be located above the waterline formed by an 8.5 degree heel, to port or starboard, at a draft corresponding to the assigned summer freeboard, but not less than 1000 mm above the summer waterline.

Where the inboard end of the garbage chute exceeds 0.01L above the summer waterline, valve control from the freeboard deck is not required, provided the inboard gate valve is always accessible under service conditions.

The distance between the two gate valves should be adequate to allow the smooth operation of the interlock system.

Alternatively, the upper gate valve may be replaced by a hinged weathertight cover at the inboard end of the chute together with a discharge flap which replaces the lower gate valve.

The cover and flap are to be arranged with an interlock so that the discharge flap cannot be operated until the hopper cover is closed.

The chute is to be constructed of material of substantial thickness up to, and including, the cover.

The gate valve(s) controls and/or hinged cover are to be clearly marked: "Keep closed when not in use".

Where the inboard end of a garbage chute is below the margin line in a passenger ship, or the critical (crucial) waterline of a cargo ship of more than 100 m in length then:

- (i) the inboard end hinged cover/valve is to be watertight.
- (ii) the valve is to be a screw-down non-return valve fitted in an easily accessible position above the deepest subdivision load line.
- (iii) the screw-down non-return valve is to be controlled from a position above the bulkhead deck and provided with open/shut indicators. The valve control is to be clearly marked: "Keep closed when not in use".

BB. Where plastic pipes are used for sanitary discharges and scuppers, they are also subject to the requirements of the Table, and the valve at the shell is to be operated from outside the space in which the valve is located.

Where such plastic pipes are located below the summer waterline (timber summer load waterline), the valve is to be operated from a position above the freeboard deck.

The portion of discharge line from the shell to the first valve as well as shell fittings and valves shall be of steel, bronze or other approved ductile material.

The approval of plastic piping in any location will be subject to the consideration of strength and fire hazards involved with special reference to penetrations through bulkheads, decks or other significant compartment boundaries.

Attention must also be paid to valid fire technical regulations.

LL11 – The Table

Discharges coming from enclosed spaces below the freeboard deck or on the freeboard deck		Discharges coming from other spaces	
General requirement Reg. 22(1) where inboard end < 0.01L above SWL	Discharges through machinery space	Alternatives (Reg. 22(1)) where inboard end > 0.01L above SWL	outboard end > 450mm below FB deck or < 600mm above SWL Reg. 22(3)
	Superstructure or Deckhouse Deck	> 0.02L above SWL	otherwise Reg. 22(4)
Diagrams showing discharge configurations for various deck levels (FB Deck, SWL) and valve types (1-14).		Diagrams showing discharge configurations for various deck levels (FB Deck, SWL) and valve types (9-14).	
Symbols: ▽ inboard end of pipes ↘ outboard end of pipes ↙ pipes terminating on the open deck		* / control of the valves are to be in an approved position + remote control normal thickness substantial thickness	

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