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CIRCULAR

To : All Offices

From : General Manager
ISClass

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RE : SOLAS CHAPTER 11-2 –REGULATION 4

There have been recent cases of ships built under the domestic rules of a country and converted to international going vessels which do not comply to SOLAS Chapter II-2 Regulation 4 relating to the suction and discharge piping of the emergency fire pump.

SOLAS Regulation 4.6.3.1 stated

" not only emergency pumps, but also seawater inlet, suction and delivery pipes with valves, etc should be outside the compartment containing the other fire pumps. Only short lengths of suction and discharge piping may, however, under certain circumstances, penetrate the machinery spaces if enclosed ***in substantial steel casing.*** *In lieu of the steel casing the pipe may be* ***insulated to A-60 class standard*** *"*

All approved drawings should clearly show compliance with the above requirement if there are short lengths of suction and discharge piping from emergency pump penetrating the compartments containing other fire pumps which in most cases are the Machinery Category "A" spaces.

Surveyors on site are to note the above and indicate in their survey reports that the above has been complied with.

SOLAS Chapter II-2 Regulation 4 is attached for your information.

This circular takes immediate effect.

Regulation 4 - Fire pumps, fire mains, hydrants and hoses

4.2.2 *Capacity of additional fire pumps*

. Each pump for fire extinguishing which is installed in addition to the required number of pumps should have a capacity of at least 25 m^3/h and should be capable of delivering at least the two jets of water required in regulation II-2/4.5.1.

4.3.1.3 *Number and type of fire pumps*

. Cargo ships of less than 1,000 gross tonnage should be provided with not less than two power fire pumps, one of which should be an independently power driven pump.

4.3.3.2 *Supply and pressure of emergency pumps*

. There should be an alternative means consisting of a fixed independently driven emergency pump which should be capable of supplying two jets of water at a minimum pressure of 0.25 N/mm^2.

4.3.3.2.1 *Capacity of emergency fire pumps*

. The capacity of the emergency fire pump should be not less than 40% of the required total capacity of the fire pumps as per regulation II-2/4.2.1.

4.3.3.2.3 *Heating of diesel driven power sources and other means of starting*

1. If the room for the diesel driven power source is not heated, the diesel driven power source for the pump should be fitted with electric heating of cooling water or lubricating oil.

2. The other means of starting include those by compressed air, electricity or other sources of stored energy, hydraulic power or starting cartridges.

4.3.3.2.5 *Exception in case of ballast condition*

. The ballast condition of a ship on entering or leaving a dry dock need not be considered a service condition.

4.3.3.2.7 *Type of doors in case of an airlock*

. In case of an airlock, the door of the machinery space should be of A-60 class standard, the other door should be at least of steel, both reasonably gastight, self-closing and without any hold back arrangements.

4.3.3.3 *Capacity of alternative means of providing water for fire fighting*

. The alternative means of providing water for fire fighting purposes should be a pump with a capacity of at least 25 m^3/h for passenger ships and of at least 15 m^3/h for cargo ships.

4.3.4.1 *Automatic starting of fire pumps and prevention of freezing in pipes*

1. Only one of the required fire pumps needs to be provided with automatic starting.

2. Special attention should be given to the design of the continuously pressurized pipelines for prevention of freezing in pipes in ships entering areas where low temperatures may exist.

4.3.4.2 *Availability of water supply*

. Immediate availability of water supply can be achieved either by automatic start of at least one fire pump or by remote starting from the navigation bridge of at least one fire pump. If the pump starts automatically or if the bottom valve cannot be opened from where the pump is remotely started, the bottom valve should always be kept open.

4.3.4.3 *Exception for cargo ships of less than 1,600 gross tonnage*

. This requirement may be waived for cargo ships of less than 1,600 gross tonnage if the fire pump starting arrangement in the machinery space is in an easily accessible position.

4.4.2 *Pressure for ships less than 1,000 gross tonnage*

. A pressure of 0.25 N/mm^2 should be maintained for ships less than 1,000 gross tonnage.

4.5.1 *Location of hydrant in machinery spaces*

. At least one hydrant with hose, nozzle and coupling wrench should be provided in machinery spaces of category A.

4.6.1 *Drainage of fire mains and shutting off fire main branches*

. Fire mains should be capable of being drained. Valves should be installed in the main for shutting off from the weather deck fire main branches used for purposes other than fire fighting.

4.6.3 *Arrangements of emergency pumps, seawater inlet, suction and delivery pipes and sea-chests*

1. Not only emergency pumps, but also seawater inlet, suction and delivery pipes with valves, etc. should be outside the compartment containing the other fire pumps. Only short lengths of suction and discharge piping may, however, under certain circumstances, penetrate the machinery spaces if enclosed in substantial steel casing. In lieu of the steel casing the pipe may be insulated to A-60 class standard.

The pipe should have substantial wall thickness, in no case less than 11 mm, and should be all welded except for the flanged connection to the sea inlet valve.

The sea-chest with valve and the main part of the suction piping should be, in general, outside the machinery spaces. If this arrangement cannot be made, the sea-chest may be fitted in the machinery spaces on the condition that the valve is remotely controlled from a position near the pump, in the same compartment, and the suction pipe is as short as practicable.

2. The emergency fire pump should be placed so that the main requirements of regulation II-2/4.6.3 can be complied with. The discharge line of the emergency fire pump should be provided with isolating valves placed outside the fire pump space.

4.7.1 *Length of fire hoses*

. Fire hoses should have a length of:

- at least 10 m;
- not more than 15 m in machinery spaces;
- not more than 20 m for other spaces and open decks; and
- not more than 25 m for open decks on ships with a maximum breadth in excess of 30 m.

4.7.4.1 *Additional hoses and nozzles when carrying dangerous goods*

. Ships carrying dangerous goods in accordance with regulation II-2/54 should be provided with 3 additional hoses and 3 additional nozzles (see also interpretations of regulation II-2/54.2.1.2).

4.7.4.2 *Number of fire hoses in cargo ships of less than 1,000 gross tonnage*

. In cargo ships of less than 1,000 gross tonnage, the number of fire hoses should be calculated in accordance with the provisions of regulation II-2/4.7.4.1. However, the number of hoses should in no case be less than three.

4.8.1 *Diameter of nozzles*

. Nozzles larger in diameter may be provided if the requirements relating to the provision of water for fire fighting purposes are met.