No. 100 (Feb 2008) IACS recommended practice on the time requirement for thoroughly closing sea inlets and discharges below the waterline in case of influx of water

International Convention on Load Lines, 1966 Regulation 22 (3) in the amended protocol, MSC.143(77), reads:

In manned machinery spaces, main and auxiliary sea inlets and discharges in connection with the operation of machinery may be controlled locally. The controls shall be readily accessible and shall be provided with indicators showing whether the valves are open or closed.

SOLAS II-1 Reg 48.3 reads:

The location of the controls of any valve serving a sea inlet, a discharge below the waterline or a bilge injection system shall be so sited as to allow adequate time for operation in case of influx of water to the space, having regard to the time likely to be required in order to reach and operate such controls. If the level to which the space could become flooded with the ship in the fully loaded condition so requires, arrangements shall be made to operate the controls from a position above such level.

Recommended practice:

A calculation should be carried out to show that the time taken from alarm activation plus the time* to reach and fully close manually operated or powered valves is less than the time taken for the influx of water to reach the control without submergence of the platform on which the person is operating the valve.

(* The time it will take to reach and close the sea valves should be determined by multiplying the inverse of the nominal speed of travel of a person onboard (1.0 m/sec based on the values taken from MSC/Circ.1033) times the distance to be travelled from the platform in way of manually operated valves (or the actuator for valves controlled by stored mechanical energy) to either:

(i) the highest position of the control room for an ER under continuous manned supervision; or

(ii) from the navigation bridge for an unmanned ER.

The time it takes for the influx of water into the ER should be determined based on the fluid dynamic principles contained in MSC.245(83) applied to a breach in the largest diameter seawater line in the lowest and highest locations in the ER and the valve associated with that seawater line.)

In the event calculations are not available, 10 minutes shall be regarded as adequate time for operation unless other requirements are specified by the flag Administration.

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