M29 cont'd

M29.2.9

(a) Alarms are to be both audible and visual. If arrangements are fitted to silence audible alarms they are not to extinguish visible alarms.
(b) The local silencing of bridge or accommodation alarms is not to stop the audible machinery space alarm.
(c) Machinery alarms should be distinguishable from other audible alarms, i.e. fire, CO_2 flooding.
(d) The alarm system is to be so arranged that acknowledgement of visual alarms is clearly noticeable.

M29.2.10 If an alarm has been acknowledged and a second fault occurs before the first is rectified, then audible and visual alarms are to operate again.

Alarms due to temporary failures are to remain activated until acknowledged.

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M30 Safety systems for vessels with periodically unattended machinery spaces

(1978) (Rev. 1 1997)

M30.1 Definition

The safety system is intended to operate automatically in case of faults endangering the plant so that:
(i) normal operating conditions are restored (by starting of standby units), or
(ii) the operation of the machinery is temporarily adjusted to the prevailing conditions (by reducing the output of machinery), or
(iii) machinery and boilers are protected from critical conditions by stopping the machinery and shutting off the fuel to the boilers respectively (shutdown).

M30.2 General requirements

M30.2.1 Where a safety system is required by the Rules, the system is to comply with M30.2.2 - M30.2.8.

M30.2.2 Operation of the safety system shall cause an alarm.

M30.2.3 The safety system intended for the functions listed under M30.1 (iii) is to be independent of all other control and alarm systems so that failure or malfunction in these systems will not prevent the safety system from operating. For the safety systems intended for functions listed under M30.1(i) and (ii), complete independence of other control and alarm systems is not required.

M30.2.4 In order to avoid undesirable interruption in the operation of machinery, the system is to intervene sequentially after the operation of alarm system by:

Starting of standby units,
load reduction or shutdown, such that the least drastic action is taken first.

M30.2.5 The system should be designed to 'fail safe'. The characteristics of 'fail safe' of a system is to be evaluated on the basis not only of the safety system itself and its associated machinery, but also on the inclusion of the whole machinery installation as well as the ship.

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M30.2.6 Safety systems of different units of the machinery plant are to be independent. Failure in the safety system of one part of the plant is not to interfere with the operation of the safety system in another part of the plant.

M30.2.7 When the system has been activated, means are to be provided to trace the cause of the safety action.

M30.2.8 When the system has stopped a unit, the unit is not to be restarted automatically before a manual reset has been carried out.

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M31 (1978) Continuity of electrical power supply for vessels with periodically unattended machinery spaces

M31.1 The continuity of electrical power on vessels with periodically unattended machinery spaces is to be assured in accordance with M31.2 and M31.3.

M31.2 For vessels having the electrical power requirements normally supplied by one ship's service generator in case of loss of the generator in operation, there shall be adequate provisions for automatic starting and connecting to the main switchboard of a standby generator of sufficient capacity to permit propulsion and steering and to ensure the safety of the ship with automatic re-starting of the essential auxiliaries including, where necessary, sequential operations. This standby electric power is to be available automatically in not more than 45 seconds.

M31.3 For vessels having the electrical power requirements normally supplied by two or more ship's service generating sets operating in parallel, arrangements are to be provided (by load shedding, for instance) to ensure that in case of loss of one of these generating sets, the remaining ones are kept in operation without overload to permit propulsion and steering and to ensure the safety of the ship.

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