

Installation Positions of Gas Detection and Alarm Systems for Mobile Offshore Drilling Units

Amended Rules

Rules for the Survey and Construction of Steel Ships Part P

Reason for Amendment

Requirements for mobile offshore drilling units are specified in Part P of the Rules for the Survey and Construction of Steel Ships. IACS Unified Requirements (UR) D11 specifies requirements related to fire extinguish systems of such units and these requirements have also already been incorporated into the NK Rules.

The expressions such as “near other openings” with regard to the installation positions of fixed gas detection and alarm systems required by the UR D11 were somewhat unclear. IACS, therefore, reviewed the relevant requirements and adopted UR D11(Rev.4) for clarification purposes.

Accordingly, relevant requirements are amended based on IACS UR D11(Rev.4).

Outline of Amendment

Clarifies the installation positions of gas detection and alarm systems required for mobile offshore drilling units.

“Rules for the survey and construction of steel ships” has been partly amended as follows:

Part P MOBILE OFFSHORE DRILLING UNITS AND SPECIAL PURPOSE BARGES

Chapter 15 FIRE EXTINGUISHING SYSTEMS

15.2 Mobile Offshore Drilling Units

15.2.11 Gas Detection and Alarm System

Sub-paragraph -1 has been amended as follows.

1 Flammable gas detection and alarm system

- (1) A fixed automatic gas detection and alarm system are to be provided to the satisfaction of the Society so arranged as to monitor continuously all enclosed areas of the units in which an accumulation of flammable gas may be expected to occur. The fixed automatic combustible gas detection and alarm systems are, as a minimum, to be provided for the following areas:
 - (a) cellar decks;
 - (b) drill floors;
 - (c) ventilation intake of positive pressure explosion-proof driller’s cabin;
 - ~~(d)~~ mud pit areas;
 - ~~(e)~~ shale shaker areas;
 - ~~(f)~~ enclosed spaces containing the open components of mud circulation systems from the bell nipple to the mud pits;
 - ~~(f) ventilation intakes of enclosed machinery spaces contiguous to hazardous areas and containing internal combustion engines and boilers; and~~
 - (g) ventilation intakes and near other openings of accommodation spaces;
 - (h) ventilation intakes of enclosed machinery spaces contiguous to hazardous areas and containing internal combustion engines, boilers, or non-explosion proof electrical equipment;
 - (i) air intakes to all combustion engines or machinery, including internal combustion engines, boilers, compressors or turbines, located outside of an enclosed machinery space;
 - (j) at each access door to accommodation spaces;
 - (k) near other openings, including emergency egress, of accommodation spaces, regardless if these openings are fitted with self-closing and gastight closing appliances.
- (2) Notwithstanding (1) above, fixed automatic gas detection and alarm systems are not required for the following areas:
 - (a) near access doors to accommodation spaces where these form part of an air-lock which is provided with a gas detection and alarm system between the two doors of the air-lock;
 - (b) near emergency egress doors which are fitted with a mechanism to prevent uses other than in an emergency (e.g. doors fitted with security seals acting as a deterrent but easily breakable in a real emergency.);
 - (c) near other openings which are provided with closing appliances of non-opening type, e.g.

bolted closed maintenance ways etc.

- (23) The specifications of the fixed automatic gas detection and alarm systems are to be in accordance with the following (a) to (c):
- (a) the gas detectors are to be connected to an audible and visual alarm system with indicators on the drill floor and in the main control station;
 - (b) the alarm system is to be capable of clearly indicating at the main control point by aural and visual means the concentration and locations of the gas hazard;
 - (c) the combustible gas detectors are to alarm at not more than 25 % and at 60 % of the lower explosive limit (*LEL*).
- (24) On the unit, at least two portable combustible gas monitoring devices are to be provided, each capable of accurately measuring a concentration of flammable gas.