

Amended Rules for Mobile Offshore Drilling Units

Dec. 2019



KR

- Main Amendments -

(1) Effective date : 1 Jan 2020 (Date of construction or which are at a similar stage of construction)

- Equivalency : Requirements for equivalency have been harmonized with other Rules
- Reference of Annex : Application of Annex has been indicated in Rules
- Reflected MSC Res.407(96) : Acceptance of foam firefighting appliances in FSS Code
- Editorial modification
- Reflected MSC Res.435(98) :
- reflected Res.MSC.435(98)
 - The requirements have been amended:
 - fire extinguishing system on drilling floor
 - requirement for access
 - The requirements have been amended to clarify what to consider when disconnection and shutdown (shutdown logic system and system independence).
 - The requirements have been newly added:
 - qualification to perform repair, maintenance and overhaul of hazardous area certified equipment.
 - registration of electrical equipment installed in hazardous areas.
- The reference standards that apply to hazardous areas have been updated to the latest IEC international standards.

(2) Effective date : 1 Jan. 2020 (Date of which application for survey is submitted)

● To reflect IACS UR Z15 (Rev.3 May 2019) for CoC

(3) Effective date : 1 Jan 2020 (Contracted date of construction)

● To reflect IACS UR D3(Rev. 6 Nov. 2018)

(1) Effective date : 1 Jan 2020

(Date of construction)

Present	Amendment
<p style="text-align: center;">CHAPTER 1 GENERAL</p> <p style="text-align: center;">Section 1 General</p> <p>101. Application</p> <p>1. to 5. <omitted></p> <p>6. When drilling systems are classed by the Society upon request of the Owner, drilling systems are to be comply with the Guidance. [See Guidance]</p> <p>102. to 103. <omitted></p> <p>104. <u>Equivalency and novel features</u></p> <p><u>1. Alternative hull construction, equipment, machinery and their arrangement and scantlings will be accepted by the Society, provided that the Society is satisfied that such construction, equipment, machinery and their arrangement and scantlings are equivalent to those required in the Rules.</u></p> <p><u>2. Units which contain novel features of design, with respect to buoyancy, elevating arrangements, structural arrangements, machinery, etc., to which the Rules are not directly applicable, may be classed, when approved by the Society on the basis that the Rules, in so far as applicable, have been complied with and that special consideration has been given to the novel features based on the best information available at the time.</u></p> <p><hereafter, omitted></p>	<p style="text-align: center;">CHAPTER 1 GENERAL</p> <p style="text-align: center;">Section 1 General</p> <p>101. Application</p> <p>1. to 5. <same as current Rules></p> <p>6. When drilling systems are classed by the Society upon request of the Owner, drilling systems are to be comply with the Annex 1. [See Guidance]</p> <p>102. to 103. <same as current Rules></p> <p>104. Equivalency and novel features</p> <p><u>The equivalence of alternative and novel features which deviate from or are not directly applicable to the Rules is to be in accordance with Pt1 Ch 1 104. of Rules for the Classification of Steel Ships</u></p> <p><hereafter, same as current Rules></p>

Present	Amendment
<p style="text-align: center;">CHAPTER 3 CONSTRUCTION, STRENGTH AND MATERIALS</p> <p style="text-align: center;">Section 1 General <omitted></p> <p style="text-align: center;">Section 2 Access</p> <p>201. General</p> <p>1. Each space within the unit should be provided with at least one permanent means of access to enable, throughout the life of a unit, overall and close-up inspections and thickness measurements of the unit's structures to be carried out by the Administration, the company, and the unit's personnel and others as necessary. Such means of access should comply with the provisions of paragraph 204. and with the Technical provisions for means of access for inspections, adopted by the Maritime Safety Committee by resolution MSC.133(76), as may be amended by the Organization. <newly added></p> <p><hereafter, omitted></p>	<p style="text-align: center;">CHAPTER 3 CONSTRUCTION, STRENGTH AND MATERIALS</p> <p style="text-align: center;">Section 1 General <same as current Rules></p> <p style="text-align: center;">Section 2 Access</p> <p>201. General</p> <p>1. Each space within the unit should be provided with at least one permanent means of access to enable, throughout the life of a unit, overall and close-up inspections and thickness measurements of the unit's structures to be carried out by the Administration, the company, and the unit's personnel and others as necessary. Such means of access should comply with the provisions of paragraph 204. and with the Technical provisions for means of access for inspections, adopted by the Maritime Safety Committee by resolution MSC.133(76), as may be amended by the Organization. <u>Detail of access should be applied in accordance with Annex 2 in Guidance relating to this Rules. [2019]</u></p> <p><hereafter, same as current Rules></p>

Present	Amendment
<p style="text-align: center;">CHAPTER 7 MACHINERY AND ELECTRICAL INSTALLATIONS IN HAZARDOUS AREAS</p> <p>Section 1 - 3 <same as the present Rules></p> <p>Section 4 Emergency Shutdown for Electrical Equipment</p> <p>401. Emergency conditions due to drilling operations</p> <ol style="list-style-type: none"> 1. <same as the present Rules> 2. <u>In the case of units using dynamic positioning systems as a sole means of position keeping, special consideration may be given to the selective disconnection or shutdown of machinery and equipment associated with maintaining the operability of the dynamic positioning system in order to preserve the integrity of the well.</u> <p>3. - 5. <same as the present Rules></p> <p>402. <same as the present Rules></p>	<p style="text-align: center;">CHAPTER 7 MACHINERY AND ELECTRICAL INSTALLATIONS IN HAZARDOUS AREAS</p> <p>Section 1 - 3 <same as the present Rules></p> <p>Section 4 Emergency Shutdown for Electrical Equipment</p> <p>401. Emergency conditions due to drilling operations</p> <ol style="list-style-type: none"> 1. <same as the present Rules> 2. <u>In the case of units using dynamic positioning(DP) systems disconnection or shutdown of machinery and equipment necessary for maintaining the operability of the dynamic positioning system should be based on a shutdown logic system designed to preserve the capability to maintain operational control over the integrity of the well and station keeping capability. Shutdown of generators and related power supply equipment needed for the operation of the dynamic positioning system should be divided into independent groups to allow response to gas detection alarms while maintaining position keeping.</u> 3. - 5. <same as the present Rules> <p>402. <same as the present Rules></p>

Present	Amendment
<p style="text-align: center;">Section 5 Electrical Installations in Hazardous Areas</p> <p>501. Selection and installation of electrical equipment</p> <p>1. Electrical equipment and wiring installed in hazardous areas are to be limited to that necessary for operational purposes. Only the cables and types of equipment described in this chapter may be installed. Selection and installation of equipment and cables in hazardous areas should be in accordance with following standards.</p> <p>(1) <u>KS C</u> IEC 61892-1: Mobile and fixed offshore units—Electrical installations—Part 1: General requirements and conditions.</p> <p>(2) <u>KS C</u> IEC 61892-2: Mobile and fixed offshore units—Electrical installations—Part 2: System design.</p> <p>(3) <u>KS C</u> IEC 61892-3: Mobile and fixed offshore units—Electrical installations—Part 3: Equipment.</p> <p>(4) IEC 61892-4: 2007 Mobile and fixed offshore units—Electrical installations—Part 4: Cables.</p> <p>(5) <u>KS C</u> IEC 61892-5: Mobile and fixed offshore units—Electrical Installations—Part 5: Mobile units.</p> <p>(6) <u>KS C</u> IEC 61892-6: Mobile and fixed offshore units—Electrical installations—Part 6: Installation.</p> <p>(7) <u>KS C</u> IEC 61892-7: Mobile and fixed offshore units—Electrical installations—Part 7: Hazardous areas.</p> <p>2. <same as the present Rules></p> <p>502. Protection of electrical installations</p> <p>1. Electrical apparatus used in hazardous areas is to be manufactured, tested, marked and installed in accordance with following standards and certified by an independent testing laboratory recognized by the Society.</p> <p>(1) KS C IEC 60079-4: Electrical apparatus for explosive gas atmospheres—Part 4: Method of test for ignition temperature.</p>	<p style="text-align: center;">Section 5 Electrical Installations in Hazardous Areas</p> <p>501. Selection and installation of electrical equipment</p> <p>1. Electrical equipment and wiring installed in hazardous areas are to be limited to that necessary for operational purposes. Only the cables and types of equipment described in this chapter may be installed. Selection and installation of equipment and cables in hazardous areas should be in accordance with following standards.</p> <p>(1) KS C IEC 61892-1₂: Mobile and fixed offshore units—Electrical installations—Part 1: General requirements and conditions.</p> <p>(2) KS C IEC 61892-2₂: Mobile and fixed offshore units—Electrical installations—Part 2: System design.</p> <p>(3) KS C IEC 61892-3₂: Mobile and fixed offshore units—Electrical installations—Part 3: Equipment.</p> <p>(4) KS C IEC 61892-4₂: Mobile and fixed offshore units—Electrical installations—Part 4: Cables.</p> <p>(5) KS C IEC 61892-5₂: Mobile and fixed offshore units—Electrical Installations—Part 5: Mobile units.</p> <p>(6) KS C IEC 61892-6₂: Mobile and fixed offshore units—Electrical installations—Part 6: Installation.</p> <p>(7) KS C IEC 61892-7₂: Mobile and fixed offshore units—Electrical installations—Part 7: Hazardous areas.</p> <p>2. <same as the present Rules></p> <p>502. Protection of electrical installations</p> <p>1. Electrical apparatus used in hazardous areas is to be manufactured, tested, marked and installed in accordance with following standards and certified by an independent testing laboratory recognized by the Society.</p> <p>(1) ~ (4) <deleted></p>

Present	Amendment
<p>(2) IEC 60079-4A: 1970 Electrical apparatus for explosive gas atmospheres—Part 4: Method of test for ignition temperature—First supplement.</p> <p>(3) KS C IEC 60079-10: Electrical apparatus for explosive gas atmospheres—Part 10: Classification of hazardous areas.</p> <p>(4) IEC/TR 60079-12: 1978 Electrical apparatus for explosive gas atmospheres—Part 12: Classification of mixtures of gases of vapours with air according to their maximum experimental safe gaps and minimum igniting currents.</p> <p>(5) IEC/TR 60079-13: 1982-01 Electrical apparatus for explosive gas atmosphere—Part 13: Construction and use of rooms or buildings protected by pressurization.</p> <p>(6) KS C IEC 60079-14: Explosive atmospheres—Part 14: Electrical installations design, selection and erection.</p> <p>(7) IEC/TR 60079-16: 1990 Electrical apparatus for explosive gas atmospheres—Part 16: Artificial ventilation for the protection of analyser(s) houses.</p> <p>(8) IEC 60079-17: 2007 Explosive atmospheres—Part 17: Electrical installations inspection and maintenance</p> <p>(9) IEC 60079-19: 2006-10 Explosive atmospheres—Part 19: Equipment repair, overhaul and reclamation.</p> <p>(10) IEC/TR 60079-20: 1996 Electrical apparatus for explosive gas atmospheres—Part 20: Data for flammable gases and vapours, relating to the use of electrical apparatus.</p> <p>(11) IEC 60079-25: 2003 Electrical apparatus for explosive gas atmospheres—Part 25: Intrinsically safe systems.</p>	<p>(1) ~ (4) <deleted></p> <p>(1) IEC 60079-10-1, Explosive atmospheres - Part 10-1: Classification of areas - Explosive gas atmospheres.</p> <p>(2) IEC 60079-10-1, Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i".</p> <p>(3) IEC 60079-13, Explosive atmospheres - Part 13: Equipment protection by pressurized room "p" and artificially ventilated room "v".</p> <p>(4) KS C IEC 60079-14₂: Explosive atmospheres—Part 14: Electrical installations design, selection and erection.</p> <p>(5) EC/TR 60079-16:—1990₂, Electrical apparatus for explosive gas atmospheres—Part 16: Artificial ventilation for the protection of analyser(s) houses.</p> <p>(6) IEC 60079-17:—2007₂, Explosive atmospheres—Part 17: Electrical installations inspection and maintenance</p> <p>(7) IEC 60079-19:—2006-10₂, Explosive atmospheres—Part 19: Equipment repair, overhaul and reclamation.</p> <p>(8) IEC 60079-25, Explosive atmospheres—Part 25: Intrinsically safe electrical systems.</p>

Present	Amendment
<p>(12) IEC 60079-27: 2008 Explosive atmospheres Part 27: Fieldbus intrinsically safe concept (FISCO).</p> <p>(13) <u>KS C IEC 60079-28: Explosive atmospheres Part 28: Protection of equipment and transmission systems using optical radiation.</u></p> <p>(14) <u>IEC 60079-29-1: 2007 Explosive atmospheres Part 29-1: Gas detectors Performance requirements of detectors for flammable gases.</u></p> <p>(15) <u>IEC 60079-29-2: 2007 Explosive atmospheres Part 29-2: Gas detectors Selection, installation, use and maintenance of detectors for flammable gases and oxygen.</u></p> <p>(16) <u>KS C IEC 60079-30-1: Explosive atmospheres Part 30-1: Electrical resistance trace heating General and testing requirements.</u></p> <p>(17) <u>KS C IEC 60079-30-2: Explosive atmospheres Part 30-2: Electrical resistance trace heating Application guide for design, installation and maintenance.</u> <Newly added></p> <p>2. <same as the present Rules> <Newly added></p> <p>3. - 8. <same as the present Rules></p> <p>Section 6 <same as the present Rules></p>	<p>(9) <u>IEC 60079-28, Explosive atmospheres Part 28: Protection of equipment and transmission systems using optical radiation.</u></p> <p>(10) <u>IEC 60079-29-1, Explosive atmospheres Part 29-1: Gas detectors Performance requirements of detectors for flammable gases.</u></p> <p>(11) <u>IEC 60079-29-2, Explosive atmospheres Part 29-2: Gas detectors Selection, installation, use and maintenance of detectors for flammable gases and oxygen.</u></p> <p>(12) <u>IEC/IEEE 60079-30-1, Explosive atmospheres Part 30-1: Electrical resistance trace heating General and testing requirements.</u></p> <p>(13) <u>IEC/IEEE 60079-30-2, Explosive atmospheres Part 30-2: Electrical resistance trace heating Application guide for design, installation and maintenance.</u></p> <p>(14) <u>ISO/IEC 80079-20-1, Explosive atmospheres - Part 20-1: Material characteristics for gas and vapour classification - Test methods and data.</u></p> <p>2. <same as the present Rules></p> <p>3. <u>Repairs, maintenance and overhaul of hazardous area certified equipment should be performed by suitably qualified personnel in accordance with appropriate international standards.</u></p> <p>4. <u>There should be maintained a register of electrical equipment installed in the designated hazardous areas, including a description of the equipment, applicable degree of protection and ratings.</u></p> <p>5. - 10. <same as the present Rules></p> <p>Section 6 <same as the present Rules></p>

Present	Amendment
<p style="text-align: center;">CHAPTER 10 FIRE PROTECTION, MEANS OF ESCAPE AND FIRE EXTINCTION</p> <p style="text-align: center;">Section 1 to 2 <omitted></p> <p style="text-align: center;">Section 3 Fire Extinction</p> <p>301. to 303. <omitted></p> <p>304. Fire extinguishing system on drilling floor</p> <p>1. to 2. <omitted></p> <p>3. <u>A fixed water spray system is to be provided to protect drilling area. The minimum water application rate is not less than 20.4 l/m²-min, or</u></p> <p>4. <u>At least two dual-purpose (jet/spray) fire monitors are to be installed to cover drilling and well test areas. The minimum capacity of each monitor is not less than 100 m³/h. The monitors may be operated either remotely or locally. Monitor arranged for local operation should be sited on an accessible protected position.</u></p>	<p style="text-align: center;">CHAPTER 10 FIRE PROTECTION, MEANS OF ESCAPE AND FIRE EXTINCTION</p> <p style="text-align: center;">Section 1 to 2 <same as the present></p> <p style="text-align: center;">Section 3 Fire Extinction</p> <p>301. to 303. <same as current Rules></p> <p>304. Fire extinguishing system on drilling floor</p> <p>1. to 2. <same as current Rules></p> <p>3. <u>The drill floor is to be protected by a fixed pressure water-spraying system designed to provide a minimum water application rate of 20.4 L/m²-min to the drill floor and related equipment, including emergency shutdown equipment, critical structural components, and enclosure fire barriers.</u></p> <p>4. <u>Alternatively, multiple fixed dual-purpose (jet/spray) monitors discharging at a minimum flow rate and pressure 1,900 L/min at 1 MPa may be provided and arranged such that all areas and equipment can be reached by at least two monitors which are widely separated.</u></p> <p>5. <u>The system is to be designed for manual release from release stations located outside the protected area. Any section valves necessary for the operation of the system are to be located outside the protected area. Automatic release may be accepted by the Society.</u></p> <p>6. <u>Nozzles, piping, fittings and related components should be designed to withstand exposure to temperatures up to 925°C.</u></p> <p>7. <u>The main fire pumps may be used to supply the fixed pressure water-spraying system if they have sufficient capacity to simultaneously supply the fire main at the required flow and pressure.</u></p>

Present	Amendment
<p style="text-align: center;">Section 4 Fire Extinguishing Systems for Helicopter Facilities</p> <p>401. General</p> <p><omitted></p> <p>402. Helicopter decks and refueling facilities</p> <p><u>1. Hoses and nozzles</u> : at least two approved combination nozzle and applicators and hoses sufficient in length to reach any part of the helicopter deck are to be provided.</p> <p><u>2. Portable extinguishers</u> : at least two dry powder extinguishers of a total capacity of not less than 45 kg, but not less than 9 kg each, are to be provided.</p> <p><u>3. Back-up fire fighting system</u> : A back-up fire fighting system is to be provided, consisting of CO₂ extinguishers of a total capacity of not less than 18 kg or equivalent, one of these extinguishers being so equipped as to enable it to reach the engine area of any helicopter using the deck. The back-up system is to be located so that the equipment would not be vulnerable to the same damages as the primary extinguishing system.</p>	<p style="text-align: center;">Section 4 Fire Extinguishing Systems for Helicopter Facilities</p> <p>401. General</p> <p><same as current Rules></p> <p>402. Fire Extinguishing Systems</p> <p><u>1. In close proximity to the helideck, the following fire-fighting appliances should be provided and stored near the means of access to that helideck:</u></p> <p>(1) Portable extinguishers</p> <p>(A) <u>Primary extinguishers</u> : At least two dry powder extinguishers of a total capacity of not less than 45 kg, but not less than 9 kg each, are to be provided.</p> <p>(B) <u>Back-up extinguishers</u> : A back-up fire fighting system is to be provided, consisting of CO₂ extinguishers of a total capacity of not less than 18 kg or equivalent, one of these extinguishers being so equipped as to enable it to reach the engine area of any helicopter using the deck. The back-up system is to be located so that the equipment would not be vulnerable to the same damages as the primary extinguishing system.</p>

Present	Amendment
<p>4. Fixed foam system :</p> <p>(1) A suitable foam application system, consisting of monitors or foam making branch pipes capable of delivering foam solution at a rate of not less than $6.0 \ell/m^2\text{-min}$ ($4.1 \ell/m^2\text{-min}$ for Aqueous Film Forming Foam or Film-Forming Fluoroprotein Foam) of the areas protected (the area of a circle of diameter "D" where "D" is the distance across the main rotor and tail rotor in the fore and aft line of a helicopter) for at least 5 minutes, is to be provided.</p> <p>(2) Foam delivery at the minimum application rate is to start within 30 s of system activation. The operation of the foam system is not to interfere with simultaneous operation of the fire main.</p> <p>(3) The principal agent shall be suitable for use with salt water and conform to performance standards not inferior to those acceptable to the IMO Organization (Refer to the International Civil Aviation Organization Airport Services Manual, part 1, Rescue and Fire Fighting, chapter 8, Extinguishing Agent Characteristics, paragraph 8.1.5, Foam Specifications table 8-1, level 'B').</p> <p>5. to 8. <omitted></p> <p><hereafter, omitted></p>	<p>(2) Fixed fire fighting systems :</p> <p>(A) Fixed foam system :</p> <p>(a) A suitable foam application system, consisting of monitors or foam making branch pipes capable of delivering foam solution at a rate of not less than $6.0 \ell/m^2\text{-min}$ ($4.1 \ell/m^2\text{-min}$ for Aqueous Film Forming Foam or Film-Forming Fluoroprotein Foam) of the areas protected (the area of a circle of diameter "D" where "D" is the distance across the main rotor and tail rotor in the fore and aft line of a helicopter) for at least 5 minutes, is to be provided.</p> <p>(b) Foam delivery at the minimum application rate is to start within 30 s of system activation. The operation of the foam system is not to interfere with simultaneous operation of the fire main.</p> <p>(c) The principal agent shall be suitable for use with salt water and conform to performance standards not inferior to those acceptable to the IMO Organization (Refer to the International Civil Aviation Organization Airport Services Manual, part 1, Rescue and Fire Fighting, chapter 8, Extinguishing Agent Characteristics, paragraph 8.1.5, Foam Specifications table 8-1, level 'B').</p> <p>(B) Fire water system: at least two approved nozzles of jet/spray type and hoses sufficient in length to reach any part of the helicopter deck.</p> <p>(3) In lieu of the requirements of (2) (A), foam firefighting appliances complying with the requirements of the FSS Code.</p> <p>2. to 5. <same as current Rules></p> <p><hereafter, same as current Rules></p>

(2) Effective date : 1 Jan 2020

(Date of which application for survey is submitted)

Present	Amendment
<p style="text-align: center;">CHAPTER 2 CLASSIFICATION AND SURVEYS</p> <p style="text-align: center;">Section 1 General</p> <p>101. <omitted></p> <p>102. Definition</p> <p style="padding-left: 20px;">1.~ 12. <omitted></p> <p>13. Prompt and thorough repair</p> <p style="padding-left: 20px;">A prompt and thorough repair is a permanent repair completed at the time of survey to the satisfaction of the Surveyor, therein removing the need for the imposition of any associated <u>condition of classification, or recommendation.</u></p> <p>103. Repairs</p> <p style="padding-left: 20px;">1. ~ 2. <omitted></p> <p style="padding-left: 20px;">3. Where the damage found on structure mentioned in Par 1 is isolated and of a localised nature which does not affect the unit's structural integrity, consideration may be given by the Surveyor to allow an appropriate temporary repair to restore watertight or weather tight integrity and impose a <u>Recommendation/Condition of Class</u> in accordance with IACS PR No.35(Procedure for Imposing and Clearing <u>Recommendation/Condition of Class</u>), with a specific time limit.</p> <p><omitted></p>	<p style="text-align: center;">CHAPTER 2 CLASSIFICATION AND SURVEYS</p> <p style="text-align: center;">Section 1 General</p> <p>101. <same as the current Rules></p> <p>102. Definition</p> <p style="padding-left: 20px;">1.~ 12. <same as the current Rules></p> <p>13. Prompt and thorough repair</p> <p style="padding-left: 20px;">A prompt and thorough repair is a permanent repair completed at the time of survey to the satisfaction of the Surveyor, therein removing the need for the imposition of any associated <u>Condition of Class.</u> <i>(2020)</i></p> <p>103. Repairs</p> <p style="padding-left: 20px;">1. ~ 2. <same as the current Rules></p> <p style="padding-left: 20px;">3. Where the damage found on structure mentioned in Par 1 is isolated and of a localised nature which does not affect the unit's structural integrity, consideration may be given by the Surveyor to allow an appropriate temporary repair to restore watertight or weather tight integrity and impose a <u>Condition of Class</u> in accordance with IACS PR No.35(Procedure for Imposing and Clearing <u>Condition of Class</u>), with a specific time limit. <i>(2020)</i></p> <p><same as the current Rules></p>

(3) Effective date : 1 Jan 2020

(Contracted date of construction)

Present	Amendment
<p style="text-align: center;">CHAPTER 4 SUBDIVISION, STABILITY AND FREEBOARD Section 1 ~ 6 <omitted> Section 7 Freeboard</p> <p>701. <omitted> 702. Surface units 1. ~ 2. <omitted> 3. <u>Where moonpools are arranged within the hull in open communication with the sea, the volume of the moonpool should not be included in the calculation of any hydrostatic properties. If the moonpool has a larger cross-sectional area above the waterline at 85% of the depth for freeboard than below, an addition should be made to the geometric freeboard corresponding to the lost buoyancy. This addition for the excess portion above the waterline at 85% of the depth for freeboard should be made as prescribed below for wells or recesses. If an enclosed superstructure contains part of the moonpool, deduction should be made for the effective length of the superstructure. Where open wells or recesses are arranged in the freeboard deck, a correction equal to the volume of the well or recess to the freeboard deck divided by the waterplane area at 85% of the depth for freeboard should be made to the freeboard obtained after all other corrections, except bow height correction, have been made. Free surface effects of the flooded well or recess should be taken into account in stability calculations.</u> 4. <u>The procedure described in Par 3 should also apply in cases of small notches or relatively narrow cut-outs at the stern of the unit.</u> 5. <u>Narrow wing extensions at the stern of the unit should be considered as appendages and excluded for the determination of length (L) and for the calculation of freeboards. The Society should determine the effect of such wing extensions with regard to the provisions relating to the strength of unit based upon length (L).</u></p>	<p style="text-align: center;">CHAPTER 4 SUBDIVISION, STABILITY AND FREEBOARD Section 1 ~ 6 <same as current Rules> Section 7 Freeboard</p> <p>701. <same as current Rules> 702. Surface units 1. ~ 2. <same as current Rules> 3. ~ 5. <Deleted></p>

Present	Amendment
<p>703. Self-elevating units</p> <p>1. ~ 3. <omitted></p> <p>4. <u>Where moonpools are arranged within the hull in open communication with the sea, the volume of the moonpool should not be included in the calculation of any hydrostatic properties. If the moonpool has a larger cross-sectional area above the waterline at 85% of the depth for freeboard than below, an addition should be made to the geometric freeboard corresponding to the lost buoyancy. This addition for the excess portion above the waterline at 85% of the depth for freeboard should be made as prescribed below for wells or recesses. If an enclosed superstructure contains part of the moonpool, deduction should be made for the effective length of the superstructure. Where open wells or recesses are arranged in the freeboard deck, a correction equal to the volume of the well or recess to the freeboard deck divided by the waterplane area at 85% of the depth for freeboard should be made to the freeboard obtained after all other corrections, except bow height correction, have been made. Free surface effects of the flooded well or recess should be taken into account in stability calculations.</u></p> <p>5. <u>The procedure described in Par 3 should also apply in cases of small notches or relatively narrow cut-outs at the stern of the unit.</u></p> <p>6. <u>Narrow wing extensions at the stern of the unit should be considered as appendages and excluded for the determination of length (L) and for the calculation of freeboards. The Society should determine the effect of such wing extensions with regard to the provisions relating to the strength of unit based upon length (L).</u></p> <p>7. <omitted></p> <p>8. <omitted></p> <p><hereafter, omitted></p> <p style="text-align: center;">CHAPTER 10 FIRE PROTECTION, MEANS OF ESCAPE AND FIRE EXTINCTION Section 1 General</p> <p>101. ~ 102. <omitted> <newly added></p> <p><hereafter, omitted></p>	<p>703. Self-elevating units</p> <p>1. ~ 3. <same as current Rules></p> <p>4. ~ 6. <deleted></p> <p>4. <same as current Rules></p> <p>5. <same as current Rules></p> <p><hereafter, same as current Rules></p> <p style="text-align: center;">CHAPTER 10 FIRE PROTECTION, MEANS OF ESCAPE AND FIRE EXTINCTION Section 1 General</p> <p>101. ~ 102. <same as current Rules></p> <p>103. Definition of divisions <u>"A", "B" and "C" class divisions are defined in SOLAS regulation II-2/3. "H" class divisions are those divisions which meet the same requirements as "A" class divisions except that, when tested according to the Fire Test Procedures Code, the furnace control temperature curve is replaced with the furnace control temperature curve for hydrocarbon fires defined in national or international standards. (Examples of national or international standards are BS EN 1363-2:1999, ASTM 1529-14a or ISO/DIS 20902-1). [2019]</u></p> <p><hereafter, same as current Rules></p>

Present	Amendment
<p style="text-align: center;">Section 2 Fire Protection and Means of Escape</p> <p>201. Fire protection</p> <p>1. ~ 8 <omitted></p> <p>9. Protection of accommodation spaces,....<omitted></p> <p>(1) <u>In general, accommodation spaces, service spaces and control stations should not be located adjacent to hazardous areas. However, where this is not practicable, an engineering evaluation should be performed to ensure that the level of fire protection and blast resistance of the bulkheads and decks separating these spaces from the hazardous areas are adequate for the likely hazard.</u></p> <p><hereafter, omitted></p> <p>Table 9.1 Fire Integrity of Bulkheads Separating Adjacent Spaces <omitted></p> <p>Notes :</p> <p>1. <omitted></p> <p>2. Explanation for the subscripts and the marks on the table</p> <p>(a) ~ (c) <omitted></p> <p>(d) Bulkheads separating the navigating bridge, chartroom and radio room from each other may be an "B-0" rating. <u>Where an asterisk " * " appears in the table, the division is required to be of steel or equivalent material but not required to be of "A" class standard.</u></p> <p>(e) <u>An engineering evaluation should be conducted in accordance with 201. 9 (1). In no case should the bulkhead or deck rating be less than the value indicated in the tables.</u></p> <p><hereafter, omitted></p>	<p style="text-align: center;">Section 2 Fire Protection and Means of Escape</p> <p>201. Fire protection</p> <p>1. ~ 8 <same as current Rules></p> <p>9. Protection of accommodation spaces,....<same as current Rules></p> <p>(1) <u>In general, accommodation spaces, service spaces, control stations and spaces containing vital machinery and equipment⁽ⁱ⁾ should not be located adjacent to hazardous areas. However, where this is not practicable, an engineering evaluation should be performed in accordance with national or international standards⁽ⁱⁱ⁾ to ensure that the level of fire protection and blast resistance of the bulkheads and decks separating these spaces from the hazardous areas are adequate for the likely hazard. Where it is shown that these spaces may be exposed to a radiant heat flux in excess of 100 kw/m², the bulkhead or deck should be constructed to at least an "H-60" standard</u></p> <p>⁽ⁱ⁾ <u>Vital machinery and equipment are those that are essential to the safety of the MODU and all personnel on board. They include, but are not limited to, fire pumps, emergency sources of power, dynamic positioning systems, remote blowout preventer activation controls, and other operational or safety systems the sudden failure of which may result in hazardous situations. This does not include spaces (e.g. the driller's cabin) located on the drill floor.</u></p> <p>⁽ⁱⁱ⁾ <u>Refer to standards such as: ISO 13702:2015, or API RP 2 FB." (2019)</u></p> <p><hereafter, same as current Rules></p> <p>Table 9.1 Fire Integrity of Bulkheads Separating Adjacent Spaces <same as current Rules></p> <p>Notes :</p> <p>1. <same as current Rules></p> <p>2. Explanation for the subscripts and the marks on the table</p> <p>(a) ~ (c) <same as current Rules></p> <p>(d) Bulkheads separating the navigating bridge, chartroom and radio room from each other may be an "B-0" rating.</p> <p>(e) <u>Additional provisions for fire boundaries should be assessed in accordance with paragraph 201. 9 (1). (2019)</u></p> <p><hereafter, same as current Rules></p>

Present	Amendment
<p>202. Means of escape</p> <p>1. ~ 4. <omitted></p> <p>5. <u>Consideration is to be given to the site of superstructures and deckhouses such that in the event of fire at the drill floor at least one escape route to the embarkation position and survival craft is protected against radiation effects of that fire as far as practicable.</u></p> <p><hereafter, omitted></p> <p style="text-align: center;">Section 3 <omitted></p> <p style="text-align: center;">Section 4 Fire Extinguishing Systems for Helicopter Facilities</p> <p>401. General</p> <p>(1) ~ (4) <omitted></p> <p>(5) The fire fighting equipment as given in <u>402.</u> are to be provided.</p> <p><newly added></p> <p><u>402. Helicopter decks and refueling facilities</u> <omitted></p> <p><u>403. Alarm systems</u> <omitted></p> <p><hereafter, omitted></p>	<p>202. Means of escape</p> <p>1. ~ 4. <same as current Rules></p> <p>5. <u>Superstructures and deckhouses should be sited such that, in the event of fire at the drill floor, at least one escape route to the embarkation position and survival craft is protected against radiant heat flux levels in excess of 2.5 kW/m² emanating from the drill floor. (2019)</u></p> <p><hereafter, same as current Rules></p> <p style="text-align: center;">Section 3 <same as current Rules></p> <p style="text-align: center;">Section 4 Fire Extinguishing Systems for Helicopter Facilities</p> <p>401. General</p> <p>(1) ~ (4) <same as current Rules></p> <p>(5) The fire fighting equipment as given in <u>403.</u> are to be provided.</p> <p>402. Construction of the helidecks</p> <p>1. <u>The construction of the helidecks should be of steel or other equivalent materials. If the helideck forms the deckhead of a deckhouse or superstructure, it should be insulated to “A-60” class standard. If aluminium or other low melting point metal construction that is not made equivalent to steel is used, the following provisions should be satisfied:</u></p> <p>(1) <u>if the helideck is cantilevered over the side of the unit, after each fire that may have an effect on the structural integrity of the helideck or its supporting structures, the helideck should undergo a structural analysis to determine its suitability for further use; and</u></p> <p>(2) <u>if the helideck is located above the unit’s deckhouse or similar structure, the following conditions should be satisfied:</u></p> <p>(a) <u>the deckhouse top and bulkheads under the helideck should have no openings;</u></p> <p>(b) <u>windows under the helideck should be provided with steel shutters; and</u></p> <p>(3) <u>after each fire on the helideck or supporting structure the helideck should undergo a structural analysis to determine its suitability for further use.</u></p> <p>2. <u>A helideck should be provided with both a main and an emergency means of escape and access for fire fighting and rescue personnel. These should be located as far apart from each other as is practicable and preferably on opposite sides of the helideck.</u></p> <p>403. Helicopter decks and refueling facilities <same as current Rules></p> <p>404. Alarm systems <same as current Rules></p> <p><hereafter, same as current Rules></p>

Amended Guidance for the Classification of Mobile Offshore Drilling Units

Dec. 2019



KR

- Main Amendments -

(1) Effective date : 1 Jan 2020 (Date of construction)

- Reference of Annex : Application of Annex has been indicated in Rules
- Reflected Res.MSC.435(98)
 - IEC standards are specified to refer to the qualification criteria of personnel performing repair, maintenance and overhaul of hazardous area certified equipment.

(2) Effective date : 1 Jan 2020 (The contract date for ship construction)

- Reflected IACS UI MODU3(New Dec 2018)
 - The requirements have been newly added to ensure that equipment that continues to operate after shutdown applies to all ESD levels.

(1) Effective date : 1 Jan 2020

(Date of construction)

Present	Amendment
<p style="text-align: center;">CHAPTER 1 GENERAL</p> <p style="text-align: center;"><u>Section 1 General</u></p> <p>101. Application</p> <p>1. In application to 101. 6 of the Rules, drilling systems are to comply with Annex 1.</p> <p><hereafter, omitted></p> <p style="text-align: center;">CHAPTER 7 <Newly added></p>	<p style="text-align: center;">CHAPTER 1 GENERAL</p> <p style="text-align: center;">Section 1 General</p> <p>101. Application</p> <p>1. In application to 101. 6 of the Rules, drilling systems are to comply with Annex 1.</p> <p><hereafter, same as current Guidance></p> <p style="text-align: center;"><u>CHAPTER 7 MACHINERY AND ELECTRICAL INSTALLATIONS IN HAZARDOUS AREAS</u></p> <p style="text-align: center;"><u>Section 5 Electrical Installations in Hazardous Areas</u></p> <p>502. Protection of electrical installations</p> <p>1. In application of 502. 3 of the Rules, refer to the following <u>International Electrotechnical Commission publications or equivalent for reference to appropriate personnel qualification criteria:</u></p> <ul style="list-style-type: none"> (1) <u>IEC 60079-14, Explosive atmospheres – Part 14: Electrical installations design, selection and erection</u> (2) <u>IEC 60079-17, Explosive atmospheres – Part 17: Electrical installations inspection and maintenance</u> (3) <u>IEC 60079-19, Explosive atmospheres – Part 19: Equipment repair, overhaul and reclamation</u>

(2) Effective date : 1 Jan 2020

(The contract date for ship construction)

Present	Amendment
<p>CHAPTER 7 <Newly added></p>	<p><u>CHAPTER 7 MACHINERY AND ELECTRICAL INSTALLATIONS IN HAZARDOUS AREAS</u></p> <p><u>Section 4 Emergency Shutdown for Electrical Equipment</u></p> <p><u>402. Equipment to remain operational after emergency shutdown</u></p> <p><u>1. In application of 402. of the Rules, where emergency shutdown (ESD) systems are arranged with multiple levels of ESD, the requirement in 402., that equipment located in spaces other than enclosed spaces and which is capable of operation after shutdown as given in 401. 1 of the Rules shall be suitable for installation in zone 2 locations, shall apply for any ESD level related to gas release. Exceptions may be accepted for equipment that are expected to be out of operation during drilling operations (such as shore power panel, towing winches, windlass, jacking motors etc.).</u></p>