Amended Rules for Mobile Offshore Drilling Units

(Development Review : For external opinion inquiry)

2019. 8.



- Main Amendments -

(1) Effective date : 1 January 2020 (date for 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
- IACS UR D 11 : Editorial modification
- Reflected MSC Res.435(98) : Fire extinguishing system on drilling floor

Present	Amendment	Reason
CHAPTER 1 GENERAL	CHAPTER 1 GENERAL	
Section 1 General	Section 1 General	
101. Application	101. Application	
1. to 5. <omitted></omitted>	1. to 5. <same as="" present="" the=""></same>	
6. When drilling systems are classed by the Society upon request of the Owner, drilling systems are to be comply with the Guidance. <u>ISee Guidance</u>	 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]- 	 Application of Annex has been indicated in Rules
102. to 103. <omitted></omitted>	102. to 103. <same as="" present="" the=""></same>	
 104. Equivalency and novel features 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. 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. 	104. Equivalency and novel features 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	- Requirements for equivalency have been harmonized with other Rules

Present	Amendment	Reason
CHAPTER 10 FIRE PROTECTION, MEANS OF ESCAPE AND FIRE EXTINCTION	CHAPTER 10 FIRE PROTECTION, MEANS OF ESCAPE AND FIRE EXTINCTION	
Section 1 to Section 2 <omitted></omitted>	Section 1 to Section 2 <same as="" present="" the=""></same>	
Section 3 Fire Extinction	Section 3 Fire Extinction	
301. to 303. <omitted></omitted>	301. to 303. <same as="" present="" the=""></same>	
304. Fire extinguishing system on drilling floor	304. Fire extinguishing system on drilling floor	
 1. to 2. <omitted></omitted> 3. 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 4. 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. 	 to 2. <same as="" present="" the=""></same> 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. 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. The system is to be designed for manual release from release 	<msc 435(98),<br="" res.="">Para. 10> - MODU Code 9.8.1 - MODU Code 9.8.1</msc>
	 5. 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. 6. Nozzles, piping, fittings and related components should be designed to withstand exposure to temperatures up to 925°C. 7. 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. 	 MODU Code 9.8.2 MODU Code 9.8.3 MODU Code 9.8.4

Present	Amendment	Reason
Section 4 Fire Extinguishing Systems for Helicopter Facilities	Section 4 Fire Extinguishing Systems for Helicopter Facilities	
401. General	401. General	
<omitted></omitted>	<omitted></omitted>	
402. Helicopter decks and refueling facilities	403. Fire fighting appliance	
1. Hoses and nozzles : 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.	1. Hoses and nozzles : 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.	- Editorial modification in accordance with
 Portable extinguishers : 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. Back-up fire fighting system : 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. 	 In close proximity to the helideck, the following fire-fighting appliances should be provided and stored near the means of access to that helideck: Portable extinguishers Primary extinguishers : 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. Back-up extinguishers : 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. 	UR D11.4

Present	Amendment	Reason
 4. Fixed foam system : (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 ℓ/m²-min((4.1 ℓ/m²-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. (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. (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'). 5. to 8. <omitted></omitted>	 (2) Fixed fire fighting systems : (A) Fixed foam system : (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 ℓ/m²-min((4.1 ℓ/m²-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. (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. (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 stable 8-1, level 'B'). (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. (3) In lieu of the requirements of (2) (A), foam firefighting appliances complying with the requirements of the FSS Code. 	 Editorial modification in accordance with UR D11.4

Amended Guidance Relating to the Rules for the Classification of Mobile Offshore Drilling Units

(Development Review : For external opinion inquiry)

2019. 8.



- Main Amendments -

(1) Effective date : 1 January 2020 (date for construction)

• Reference of Annex : Application of Annex has been indicated in Rules

Present	Amendment	Reason
CHAPTER 1 GENERAL	CHAPTER 1 GENERAL	
Section 1 General	Section 1 General	
101. Application	101. Application	
1. In application to 101. 6 of the Rules, drilling systems are to comply with Annex 1.	1. In application to 101. 6 of the Rules, drilling systems are to comply with Annex 1 .	- Application of Annex has been indicated in
<hereafter, omitted=""></hereafter,>	<hereafter, as="" present="" same="" the=""></hereafter,>	Rules

Rules for the Classification of Mobile Offshore Drilling Units $$_{\rm (Final)}$$

Chapter 7 Machinery and Electrical Installations in Hazardous areas

2019. 12.



Effective Date : 1 January 2020

(The keels of which are laid or which are at a similar stage of construction)

• reflected Res.MSC.435(98)

- The requirements have been amended to clarity 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.

Present	Amendment	Remark
CHAPTER 7 MACHINERY AND ELECTRICAL INSTALLATIONS IN HAZARDOUS AREAS	CHAPTER 7 MACHINERY AND ELECTRICAL INSTALLATIONS IN HAZARDOUS AREAS	
Section 1 - 3 <same as="" present="" rules="" the=""></same>	Section 1 - 3 <same as="" present="" rules="" the=""></same>	
Section 4 Emergency Shutdown for Electrical Equipment	Section 4 Emergency Shutdown for Electrical Equipment	
401. Emergency conditions due to drilling operations	401. Emergency conditions due to drilling operations	
 <same as="" present="" rules="" the=""></same> 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. - 5. <same as="" present="" rules="" the=""></same> 	 <same as="" present="" rules="" the=""></same> 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. 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. - 5. <same as="" present="" rules="" the=""></same> 	 (Amended) Reflecting Res.MSC.435 (98), the requirements have been amended to clarity what to consider when disconnection and shutdown (shutdown logic system and system independence).
402. <same as="" present="" rules="" the=""></same>	402. <same as="" present="" rules="" the=""></same>	

Present	Amendment	Remark
Section 5 Electrical Installations in Hazardous Areas	Section 5 Electrical Installations in Hazardous Areas	
501. Selection and installation of electrical equipment	501. Selection and installation of electrical equipment	
 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. (1) <u>KS C</u> IEC 61892-1: Mobile and fixed offshore units- Electrical installations-Part 1: General requirements and conditions. (2) <u>KS C</u> IEC 61892-2: Mobile and fixed offshore units- Electrical installations-Part 2: System design. (3) <u>KS C</u> IEC 61892-3: Mobile and fixed offshore units- Electrical installations-Part 3: Equipment. (4) IEC 61892-4: <u>2007</u> Mobile and fixed offshore units- Electrical installations-Part 4: Cables. (5) <u>KS C</u> IEC 61892-5: Mobile and fixed offshore units- Electrical Installations-Part 5: Mobile units. (6) <u>KS C</u> IEC 61892-6: Mobile and fixed offshore units- Electrical installations-Part 6: Installation. (7) <u>KS C</u> IEC 61892-7: Mobile and fixed offshore units- Electrical installations-Part 7: Hazardous areas. 	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 follow- ing standards. (1) KS-C IEC 61892-1:, Mobile and fixed offshore units-	(Amended) - The reference standards that apply to hazardous areas have been updated to the latest IEC international standards. (Amended)
2. <same as="" present="" rules="" the=""></same>	2. <same as="" present="" rules="" the=""></same>	- IEC 60079-4:1975, IEC 60079-4A:1970, IEC/TR
502. Protection of electrical installations	502. Protection of electrical installations	60079-12:1978 and IEC/ TR 60079-20:1996 have
1. Electrical apparatus used in hazardous areas is to be manufac- tured, tested, marked and installed in accordance with following standards and certified by an independent testing laboratory rec- ognized by the Society.	1. Electrical apparatus used in hazardous areas is to be manufac- tured, tested, marked and installed in accordance with following standards and certified by an independent testing laboratory rec- ognized by the Society.	been replaced by IEC 60079-20-1:2010. And then IEC 60079-20-1
(1) KS C IEC 60079-4: Electrical apparatus for explosive gas atmospheres—Part 4: Method of test for ignition temperature.	(1) KS C IEC 60079-4: Electrical apparatus for explosive gas atmospheres—Part 4: Method of test for ignition temperature.	:2010 has been replaced by ISO/IEC 80079-20-1: 2017.

Present	Amendment	Remark
 (2) IEC 60079-4A: 1970 Electrical apparatus for explosive gas atmospheres—Part 4: Method of test for ignition temperature <u>-First supplement.</u> (3) KS C IEC 60079-10: Electrical apparatus for explosive gas atmospheres—Part 10: Classification of hazardous areas. <newly added=""></newly> (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. (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. 	 (2) IEC 60079-4A: 1970 Electrical apparatus for explosive gas atmospheres Part 4: Method of test for ignition temperature —First supplement. (3) KS C IEC 60079-10: Electrical apparatus for explosive gas atmospheres Part 10: Classification of hazardous areas. (1) IEC 60079-10-1, Explosive atmospheres - Part 10-1: Classification of areas - Explosive gas atmospheres. (1) IEC 60079-10-1, Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i". (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. (5)(3) IEC/TR 60079-13: 1982-01 Electrical apparatus for explosive gas atmosphere Part 13: Construction and use of rooms or buildings protected by pressurization. IEC 60079-13, Explosive atmospheres - Part 13: Equipment protection by pressurized room "p" and artificially ventilated 	 IEC 60079-10:2002 has been replaced by IEC 60079-10-1:2008. And then IEC 60079-10-1: 2010 has been replaced by IEC 60079-10-1:2015. IEC/TR 60079-13:1981 has been finally revised to IEC 60079-13:2017.
 (6) KS C IEC 60079-14: Explosive atmospheres—Part 14: Electrical installations design, selection and erection. (7) IEC/TR 60079-16: 1990 Electrical apparatus for explosive gas atmospheres—Part 16: Artificial ventilation for the protection of analyser(s) houses. (8) IEC 60079-17: 2007 Explosive atmospheres—Part 17: Electrical installations inspection and maintenance (9) IEC 60079-19: 2006-10 Explosive atmospheres—Part 19: Equipment repair, overhaul and reclamation. (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. (11) IEC 60079-25: 2003 Electrical apparatus for explosive gas atmospheres—Part 25: Intrinsically safe systems. 	 (6)(4) KS C IEC 60079-14:, Explosive atmospheres—Part 14: Electrical installations design, selection and erection. (7)(5) EC/TR 60079-16: 1990, Electrical apparatus for explosive gas atmospheres—Part 16: Artificial ventilation for the protection of analyser(s) houses. (8)(6) IEC 60079-17: 2007, Explosive atmospheres—Part 17: Electrical installations inspection and maintenance (9)(7) IEC 60079-19: 2006-10, Explosive atmospheres—Part 19: Equipment repair, overhaul and reclamation. (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. (11)(8) IEC 60079-25: 2003 Electrical apparatus for explosive gas , Explosive atmospheres—Part 25: Intrinsically safe electrical systems. 	

Present	Amendment	Remark
 (12) IEC 60079-27: 2008 Explosive atmospheres—Part 27: Fieldbus intrinsically safe concept (FISCO). (13) KS C IEC 60079-28: Explosive atmospheres—Part 28: Protection of equipment and transmission systems using optical radiation. (14) IEC 60079-29-1: 2007 Explosive atmospheres—Part 291: Gas detectors—Performance requirements of detectors for flammable gases. (15) IEC 60079-29-2: 2007 Explosive atmospheres—Part 292: Gas detectors—Selection, installation, use and maintenance of detectors for flammable gases and oxygen. (16) KS C IEC 60079-30-1: Explosive atmospheres—Part 301: Electrical resistance trace heating—General and testing requirements. (17) KS C IEC 60079-30-2: Explosive atmospheres—Part 302: Electrical resistance trace heating—Application guide for design, installation and maintenance. <newly added=""></newly> 	 (12) IEC 60079-27: 2008 Explosive atmospheres Part 27: Fieldbus intrinsically safe concept (FISCO). (13)(9) KS C IEC 60079-28: Explosive atmospheres Part 28: Protection of equipment and transmission systems using optical radiation. (14)(10) IEC 60079-29-1: 2007, Explosive atmospheres Part 29-1: Gas detectors Performance requirements of detectors for flammable gases. (15)(11) IEC 60079-29-2: 2007, Explosive atmospheres Part 29-2: Gas detectors Selection, installation, use and maintenance of detectors for flammable gases and oxygen. (16)(12) KS C IEC/IEEE 60079-30-1: Explosive atmospheres Part 30-1: Electrical resistance trace heating General and testing requirements. (17)(13) KS C IEC/IEEE 60079-30-2: Explosive atmospheres Part 30-2: Electrical resistance trace heating Application guide for design, installation and maintenance. (14) ISO/IEC 80079-20-1, Explosive atmospheres - Part 20-1: Material characteristics for gas and vapour classification - Test methods and data. 2. <same as="" present="" rules="" the=""></same> 	 IEC 60079-27:2008 has been replaced by IEC 60079-11:2011 and IEC 60079-25:2010. IEC 60079-30-1:2007 has been replaced by IEC/ IEEE 60079-30-1:2015. IEC 60079-30-2:2007 has been replaced by IEC/ IEEE 60079-30-2:2015. (Newly added)
<newly added=""></newly>	3. Repairs, maintenance and overhaul of hazardous area certified equipment should be performed by suitably qualified personnel in accordance with appropriate international standards. 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.	 Reflecting Res.MSC.435 (98), the following requirements have been newly added: qualification to perform
3 8. <same as="" present="" rules="" the=""></same>	3 8. <u>4 9.</u> <same as="" present="" rules="" the=""></same>	repair, maintenance and overhaul of hazardous
Section 6 <same as="" present="" rules="" the=""></same>	Section 6 <same as="" present="" rules="" the=""></same>	area certified equipment. • registration of electrical
		equipment installed in
		hazardous areas.

(Draft) Amended Rules for the Classification of Mobile Offshore Drilling Units

(Chapter 2 Classification and Surveys)

(For external opinion inquiry)

Aug. 2019



- Main Amendments -

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

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

Present	Amendment	Reason
CHAPTER 2 CLASSIFICATION AND SURVEYS	CHAPTER 2 CLASSIFICATION AND SURVEYS	
Section 1 General	Section 1 General	
101. 〈omitted〉 102. Definition 1.~ 12. 〈omitted〉	 101. (same as the current Rules) 102. Definition 1.~ 12. (same as the current Rules) 	
 13. Prompt and thorough repair 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> 	13. Prompt and thorough repairA 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>. (2020)	- aligned with other UR Z such as Z10 series
103. Repairs	103. Repairs	
1. ~ 2. (omitted)	1. ~ 2. (same as the current Rules)	
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.	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. <u>(2020)</u>	- reflected IACS UR Z15 (Rev.3 May 2019) 1.3.3
<pre>(omitted)</pre>	〈same as the current Rules〉	

Guidance Relating to the Rules for the Classification of Mobile Offshore Drilling Units

(Final)

Chapter 7 Machinery and Electrical Installations in Hazardous areas

2020. 1.



Effective Date : 1 January 2020

(The keels of which are laid or which are at a similar stage of construction)

• reflected Res.MSC.435(98)

- IEC standards are specified to refer to the qualification crieria of personnel performing repair, maintenance and overhaul of hazardous area certified equipment.

Present	Amendment	Remark
CHAPTER 7 <newly added=""></newly>	CHAPTER 7 MACHINERY AND ELECTRICAL INSTALLATIONS IN HAZARDOUS AREAS	
	Section 5 Electrical Installations in Hazardous Areas 502. Protection of electrical installations	(Newly added) - Reflecting Res.MSC.435
	 In application of 502. 3 of the Rules, refer to the following International Electrotechnical Commission publications or equivalent for reference to appropriate personnel qualification criteria: IEC 60079-14, Explosive atmospheres — Part 14: Electrical installations design, selection and erection IEC 60079-17, Explosive atmospheres — Part 17: Electrical installations inspection and maintenance IEC 60079-19, Explosive atmospheres — Part 19: Equipment repair, overhaul and reclamation 	personnel performing