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RULES

FOR THE CLASSIFICATION, CONSTRUCTION AND EQUIPMENT OF MOBILE OFFSHORE DRILLING UNITS AND FIXED OFFSHORE PLATFORMS

PART I CLASSIFICATION

ND No. 2-020201-019-E



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RULES FOR THE CLASSIFICATION, CONSTRUCTION AND EQUIPMENT OF MOBILE OFFSHORE DRILLING UNITS AND FIXED OFFSHORE PLATFORMS

Rules for the Classification, Construction and Equipment of Mobile Offshore Drilling Units (MODU) and Fixed Offshore Platforms of (FOP) of Russian Maritime Register of Shipping (RS, the Register) have been approved in accordance with the established approval procedure and come into force on 1 July 2022.

The present edition of the Rules is based on the 2018 edition taking into account the amendments and additions developed before publication.

The Rules set down specific requirements for MODU and FOP, consider the recommendations of the Code for the Construction and Equipment of Mobile Offshore Drilling Units (MODU Code), as adopted by the IMO Assembly on 2 December 2009 (IMO resolution A.1023(26)).

The procedural requirements, unified requirements, unified interpretations and recommendations of the International Association of Classification Societies (IACS) and the relevant resolutions of the International Maritime Organization (IMO) have been taken into consideration.

The Rules are published in the following parts:

Part I "Classification";

Part II "Hull":

Part III "Equipment, Arrangements and Outfit of MODU/FOP";

Part IV "Stability";

Part V "Subdivision";

Part VI "Fire Protection":

Part VII "Machinery Installations and Machinery";

Part VIII "Systems and Piping";

Part IX "Boilers, Heat Exchangers and Pressure Vessels";

Part X "Electrical Equipment"

Part XI "Refrigerating Plants";

Part XII "Materials";

Part XIII "Welding";

Part XIV "Automation";

Part XV "MODU and FOP Safety Assessment";

Part XVI "Signal Means";

Part XVII "Life-Saving Appliances";

Part XVIII "Radio Equipment":

Part XIX "Navigational Equipment":

Part XX "Equipment for Prevention of Pollution".

These Rules supplement the Rules for the Classification and Construction of Sea-Going Ships and the Rules for the Equipment of Sea-Going Ships.

REVISION HISTORY¹

(purely editorial amendments are not included in the Revision History)

Amended	Information on amendments	Number and	Entry-into-force
paras/chapters/		date of the	date
sections		Circular Letter	
Para 1.2.1	New definitions "Semi-submersible	312-09-1845c	15.11.2022
	unit" and "Self-elevating unit"	of 28.10.2022	
	have been introduced		
Para 2.5.1	Descriptive notations Self-elevating	312-09-1845c	15.11.2022
	unit and Semi-submersible unit have	of 28.10.2022	
	been introduced in the list of		
	descriptive notations		

¹ Amendments and additions introduced at re-publication or by new versions based on circular letters or editorial amendments.

1 GENERAL

1.1 APPLICATION

- **1.1.1** The requirements of these Rules for the Classification, Construction and Equipment of Mobile Offshore Drilling Units (MODU) and Fixed Offshore Platforms (FOP)¹ cover all self-propelled and non-self-propelled floating units, drilling ships, as well as floating offshore platforms of steel, iron concrete and composite materials, including the ice resistant type, which are held to the bottom by gravity, with piles or in a combined way and which are designed for the exploration/extraction of natural resources beneath the seabed and for other activities.
- **1.1.2** Technical requirements apply to all machinery, devices, apparatuses and equipment installed on board the MODU and FOP, whose normal operating conditions ensure the required safety of the unit as a whole in all modes of operation.
- **1.1.3** The drilling and production equipment (for recovery, refinement and transporting the products from the wells), as well as technological solutions related to the safety of drilling and well operation, shall be in conformity with the requirements of state bodies engaged in safety supervision in the oil and gas industry.

When performing technical supervision of drilling and process equipment by the Register, use may be made of the Rules for the Oil-and-Gas Equipment of Floating Offshore Oil-and-Gas Product Units, Mobile Offshore Drilling Units and Fixed Offshore Platforms² on a voluntary basis.

Compliance with the requirements of the Oil-and-Gas Equipment Rules does not relieve of responsibility to meet the state supervisory body mandatory requirements for drilling and process equipment at the stage of its design, manufacture and operation.

¹ Hereinafter referred to as "the MODU/FOP Rules".

² Hereinafter referred to as "the Oil-and-Gas Equipment Rules".

1.2 DEFINITIONS AND EXPLANATIONS

1.2.1 For the purpose of the MODU/FOP Rules, the following definitions have been adopted.

Module block is a functionally complete section of the topside, e.g. energy, accommodation, production, etc. module blocks.

Drilling ship is a ship with a drilling unit.

Upper deck is a watertight structure upon which the topside is located and from which the freeboard is measured.

Topside consists of superstructures, deckhouses and other similar structures used for accommodating personnel, equipment, systems and devices which ensure the structure operation in accordance with the purpose. A topside is generally formed from module blocks.

Sea depth is a vertical distance measured from the seabed to the average water level plus the total height of the astronomical and storm tides.

Deep-water leg platform is a platform on legs whose height is appreciably greater than their typical cross section. It consists of the following components: legs (one at least), lower substructure coming in contact with the bottom, and the upper bearing structure.

Additional requirements are those not contained in the MODU/FOP Rules, which are put forward by the Register during its classification activities.

Accommodation area is the area of a FOP used for attendants accommodation.

Drilling area is the area of a MODU/FOP in which equipment for the drilling of wells is installed.

Auxiliary equipment area is the area of a FOP in which auxiliary equipment is installed which is not directly associated with drilling and well operation and not intended for that purpose.

Clearance is a vertical distance measured from the average level of calm water plus the total height of the astronomical and storm tides to the lower section of the supporting deck or the topside of the platform.

Leg is a watertight, partially tight or vertical truss structure which takes up external loads and the weight of superimposed structures and equipment.

Helicopter facility is a MODU/FOP component used for helicopter landing and maintenance.

Artificial island (caisson) is a shallow-water platform on a solid metal foundation. Ice resistance is a capability of a unit to withstand the ice load.

Shallow-water leg platform is a platform on legs whose height is comparable to their typical cross section. They consist of the same components as deep-water leg platforms.

Module is generally defined as a hull, supporting assembly, topside and/or parts thereof, being a transport unit whose state afloat may be considered as short-time and relating to their outfitting and/or transportation periods.

It is assumed that a possibility for the module to be exposed to extreme ambient conditions is obviously eliminated.

Monopod/monocone is a single-support shallow-water platform of the tower type with vertical or inclined walls respectively.

Fixed offshore platform (FOP) is an offshore oil and gas field structure consisting of a topside and a substructure, which is fixed on the seabed throughout its use and which forms a part of the offshore oil and gas field construction.

Gravity FOP is a construction whose stability on the seabed is mainly ensured due to its deadweight and the weight of ballast taken in.

Mast FOP is a deep-water fixed offshore platform whose stability is ensured either by guys or by a relevant volume of flotation.

Pile FOP (pile-supported fixed offshore platform) is a construction whose stability on the seabed is mainly ensured due to piles driven in the seabed.

Surface unit (SU) is a unit with a MODU-, drilling ship- or barge-type displacement hull not intended for exploration/production of seabed resources.

Stability block is a watertight structure ensuring the buoyancy and stability of the construction, support of the topside and resistance to external effects when located on the seabed. It may consist of modules, supermodules, pontoons, columns, trusses and pile foundations.

FOP substructure is a part of a FOP consisting of one or several supporting members on the top of which the FOP topside is assembled.

Supporting deck or supporting girders are structures on which the topside is assembled.

Mobile offshore drilling unit (MODU) is a vessel capable of engaging in drilling operations for the exploration or for exploitation of resources beneath the seabed such as liquid or gaseous hydrocarbons, sulphur or salt.

Tension leg platform (TLP) is a unit having considerable surplus buoyancy under operating conditions, which is kept at a drilling location/recovery site with tensioned anchor ties fixed on the seabed.

Submersible unit is a column-stabilized unit supported by the seabed in operating condition.

Underwater pontoon is a flat-bottomed watertight structure with vertical sides.

Semi-submersible MODU is a column-stabilized MODU which is afloat when in operating condition and which is kept in the horizontal plane by means of anchors, thrusters or other positioning equipment.

Semi-submersible unit is a column-stabilized offshore platform, which is afloat when in operating condition and which is kept in the horizontal plane by means of anchors, thrusters or other positioning equipment and which performs operations other than drilling, hydrocarbon production, storage or processing.

Buoyancy/stability pontoon is a watertight structure not forming part of the construction, which is temporarily fitted on it or on its module/supermodule to ensure buoyancy and/or stability.

Embarkation pad is a FOP component attached to the substructure and used for embarkation and ship mooring.

Mode of operation is a condition or manner in which a MODU/FOP may operate or function while on a drilling location/recovery site or in transit. The modes of operation of a MODU/FOP include the following:

operating condition is a condition wherein a MODU/FOP is on location for the purpose of conducting drilling or other similar operations, and combined environmental and operational loadings are within appropriate design limits established for such operations;

severe storm condition is a condition wherein a MODU may be subjected to the most sever environmental loading for which it is designed. Drilling operations are assumed to be discontinued;

transit condition is a condition wherein a MODU/FOP is moving from one geographical location to another.

Self-elevating MODU is a MODU which movable legs capable of raising its hull above the surface of the sea and lowering it back into the sea.

Self-elevating unit is an offshore platform which has movable legs capable of raising its hull above the surface of the sea and lowering it back into the sea and operations other than drilling, hydrocarbon production, storage or processing.

Supermodule consists of two or more modules joined together and thus forming a transportable unit.

Production area is the area of a FOP in which equipment for the recovery of products from the wells, refinement and transportation from the FOP is installed.

Transportable unit is a structure or section thereof which is transported on inland waterways and/or on the sea.

2 CLASS OF MODU/FOP

2.1 GENERAL

2.1.1 MODU/FOP are covered by the requirements of 2.1 of Part I "Classification" of the Rules for the Classification and Construction of Sea-Going Ships¹.

Hereinafter referred to as "the Rules for the Classification".

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2.2 CLASS NOTATION

- **2.2.1** The class notation assigned by the Register to a MODU/FOP consists of the character of classification and distinguishing marks and descriptive notations defining structure and purpose of a ship or floating facility.
- **2.2.2** The character of classification assigned by the Register to a MODU/FOP consists of distinguishing marks:
 - KM⊕, KM★, (KM)★ for self-propelled MODU:
- **KE**®, **KE**★, **(KE)**★: for non-self-propelled MODU and FOP with total power output of prime movers above 100 kW.
- **2.2.3** Depending on the classification society under whose supervision and according to whose Rules the ship or floating facility was built, the character of classification is established as follows:
- .1 MODU/FOP built according to the Rules and under the Register technical supervision are assigned a class notation with the character of classification: **KM**[®] or **KE**[®];
- .2 MODU/FOP which were as a whole (or their hull, machinery installation, machinery, equipment) built and/or manufactured according to the Rules and under the supervision of another classification society recognized by the Register and which are classed with the Register are assigned a class notation with the character of classification: **KM**★ or **KE**★;
- .3 MODU/FOP which were as a whole (or their hull, machinery installation, machinery, equipment) built and/or manufactured without the supervision of a classification society recognized by the Register or without the supervision of any classification society at all, when classed with the Register, are assigned a class notation with the character of classification: $(KM) \star$ or $(KE) \star$.

2.3 SUBDIVISION DISTINGUISHING MARKS

2.3.1 At owner's request, a drilling ship is assigned one of the following subdivision distinguishing marks in its class notation: $\boxed{1}$ or $\boxed{2}$. In this case the drilling ship shall also comply with the requirements of Part V "Subdivision" of the Rules for the Classification.

2.4 DISTINGUISHING AUTOMATION MARKS

- **2.4.1** If the automation equipment of the main machinery installation and/or electric power plant of MODU or FOP comply with the requirements of Part XIV "Automation" of the MODU/FOP Rules one of the following automation marks shall be added to the MODU/FOP character of classification depending on the extent of automated functions and features of automation facilities, namely:
- **.1 AUT1** the extent of automation functions is ensured by traditional facilities and is sufficient for operation of machinery (propulsion) and/or electric power plant with unattended machinery spaces and main machinery control room;
- **.2 AUT2** the extent of automation functions is ensured by traditional facilities and is sufficient for operation of machinery (propulsion) and/or electric power plant with one operator in the engine room and with unattended machinery spaces;
- .3 AUT1-C or AUT2-C automated functions as specified for distinguishing automation marks AUT1 or AUT2, respectively, are implemented with the use of computers or programmable logic controllers meeting the requirements of Section 5 of Part XIV "Automation" of the MODU/FOP Rules;
- .4 AUT1-ICS, AUT2-ICS automated functions, as specified for distinguishing automation marks AUT1 or AUT2, respectively, are implemented with the use of integrated computerized monitoring and control system meeting the relevant requirements of Section 5 of Part XIV "Automation" of the MODU/FOP Rules. Along with that, the electronic information provided to the operating personnel and control functions at control stations are implemented with the use of the common redundant information network.
- **2.4.2** If MODU is fitted with a dynamic positioning system complying with the requirements of Section 7 of Part XIV "Automation" of the MODU/FOP Rules, one of the following distinguishing marks is added to the MODU character of classification: **DYNPOS-1**, **DYNPOS-2**, **DYNPOS-3**.
- **2.4.3** If MODU is fitted with the automated control system for power equipment of position mooring systems complying with the requirements of 8.1 and 8.2 of Part XIV "Automation" of the MODU/FOP Rules, the distinguishing mark **POSIMOOR** is added to the MODU character of classification.
- **2.4.4** If MODU is fitted with the automated control system for power equipment of position mooring system complying with the requirements of 8.1 and 8.2 of Part XIV "Automation" of the MODU/FOP Rules when applying thrusters complying with the requirements of Section 7 of Part XIV "Automation" of the MODU/FOP Rules, the distinguishing mark **POSIMOOR-TA** is added to the MODU character of classification.
- **2.4.5** If a self-propelled MODU is fitted with the main electric propulsion plant complying with the requirements of Section 17 of Part X "Electrical Equipment" the MODU/FOP Rules, the distinguishing mark **EPP** is added to the MODU character of classification.

2.5 DESCRIPTIVE NOTATION IN THE CLASS NOTATION

2.5.1 If the design of a MODU/FOP is basically the same as one of those defined under <u>1.2</u> of this Part and if it complies with the relevant requirements of the MODU/FOP Rules, one of the following descriptive notations is added to the character of classification depending on the MODU/FOP design:

MODU self-elevating;

MODU semi-submersible:

MODU submersible:

MODU tension leg;

Self-elevating unit;

Semi-submersible unit;

drilling ship:

drilling barge;

FOP gravity;

FOP pile;

FOP mast;

ice-resistant.

The descriptive notation in the class notation shall be in English. At the shipowner's discretion it may be written in two languages: English and Russian.

2.5.2 If drilling or process equipment of MODU/FOP meets the requirements of the Oil-and-Gas Equipment Rules the additional descriptive notations may be added to the character of classification in accordance with Section 6 of Part I "General Regulations for Technical Supervision" of the Oil-and-Gas Equipment Rules.

2.6 DESIGNATION OF THE OPERATING AREA AND CONDITIONS

2.6.1 If a MODU/FOP is designed to operate in a particular area and the maximum loads due to wind, waves, ice and currents are considered for this area, the area, loads and ice strengthening shall be indicated in the Classification Certificate.

2.7 DISTINGUISHING MARKS IN THE CLASS NOTATION

2.7.1 Upon request of the party, applying for the classification and/or review of the technical documentation and upon agreement with the Register, MODU/FOP may be assigned distinguishing marks indicated in 2.2 of Part I "Classification" of the Rules for the Classification.

3 SURVEY PROCEDURE AND SCOPE

3.1 SURVEY SCHEDULE AND TYPES

3.1.1 Initial surveys.

The following types of initial surveys of MODU/FOP are performed by the Register: surveys which are carried out during construction of MODU/FOP under the Register technical supervision;

surveys of MODU/FOP built under the supervision of another classification society or any other competent organization.

3.1.2 Survey of MODU and FOP in service.

3.1.2.1 The requirements for survey of MODU and FOP in service are specified in the appropriate sections of the Rules for the Classification Surveys of Ships in Service and the Guidelines on Technical Supervision of Ships in Service.

3.2 INITIAL SURVEYS DURING CONSTRUCTION

- **3.2.1** During construction, the MODU/FOP shall be surveyed in the scope prescribed by the MODU/FOP Rules and the Guidelines on Technical Supervision of Ships under Construction, according to the technical documentation (technical design and detailed (design) documentation, which are given in <u>Section 4</u>) approved by the Register.
- **3.2.2** The date of MODU/FOP survey upon completion of construction is the date of actual completion of survey and issue by the Register of a MODU/FOP Classification Certificate (for MODU as per form 3.1.2, for FOP as per form 3.1.2p) and other ship's documents (as applicable).

4 TECHNICAL DOCUMENTATION

4.1 TECHNICAL DESIGN OF A UNIT UNDER CONSTRUCTION

4.1.1 General requirements.

Before commencement of construction, the technical documentation referred to in 4.1.2 — 4.1.13 of this Part of the MODU/FOP Rules, Section 2 of Part I "General" of the Rules for the Equipment of Sea-Going Ships, 3.3.11 of Part I "Classification" of the Rules for the Classification, 1.4 of the Rules for the Cargo Handling Gear of Sea-Going Ships, 1.4.1 of the Load Line Rules for Sea-Going Ships shall be submitted for review and approval by the Register. MODU/FOP are covered by general provisions of Part II "Technical Documentation" of the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships.

- 4.1.2 General.
- **4.1.2.1** Technical specification.
- **4.1.2.2** General arrangement plan with configuration of the unit.
- 4.1.3 Hull documentation.
- **4.1.3.1** Presented drawings shall define scantlings, structure, types and sorts of material exactly, as well as specialities of hull structure and welding. Where possible drawings shall contain the following information:
 - .1 longitudinal section showing scantlings;
 - .2 transverse section showing scantlings;
 - .3 location of fixed and variable masses;
 - .4 plans of design loads for each deck;
 - .5 decks (including helideck);
 - .6 midship section;
 - .7 shell plating;
 - .8 watertight bulkheads and platforms;
 - .9 structural bulkheads and platforms:
 - .10 tank boundaries with location of overflows;
 - .11 supports and stringers;
 - .12 bracing members;
 - **.13** legs;
 - .14 structure in way of elevating arrangements;
 - .15 stability and intermediate columns;
 - .16 hulls, pontoons, footings, pads and mats:
 - .17 superstructures and deckhouses;
 - .18 helideck;
- .19 arrangement and structural details of the watertight doors and hatches with indication of height of their sills and coamings;
 - .20 welding procedure;
 - .21 non-destructive tests and location of items subjected to these tests.
 - **4.1.3.2** The following data and calculation shall be attached to the drawings:
 - .1 analysis of resistance of joints to certain loads:
- .2 resultant of forces and moments induced by wind, water, current, mooring and other loads from environment which are taken into account while performing the analysis of joint strength;
- **.3** influence of icing on loads applied to the structure, stability and surface of wind exposure;

- .4 working loads caused by the drilling derrick and its relevant appliances in the supporting structure, as well as other significant loads of the same type;
- **.5** calculations which prove fitness of structure and transmission of forces arising between the support and hull by the cargo handling gear;
 - .6 assessment of the unit resistance to overturning when it stands on the seabed;
- .7 results of relevant model tests which may be used for justification or refinement of calculations.

4.1.4 Documentation on arrangements, equipment and outfit:

- .1 arrangement plan of closing appliances;
- .2 general layout of arrangements: anchor arrangement required by the MODU/FOP Rules, steering gear, drilling ships mooring arrangement, towing arrangement, self-elevating MODU jacking system, arrangements for lifting/lowering of columns of submersible sea water pumps, self-elevating MODU fixing arrangement; drawings of rudder and rudder stock;
- .3 calculation of arrangements: anchor arrangement required by the MODU/FOP Rules, steering gear, drilling ships mooring arrangement, towing arrangement, self-elevating MODU jacking system, arrangements for lifting/lowering of columns of submersible sea water pumps, self-elevating MODU fixing arrangement; strength calculation of closing appliances (for reference purposes);
 - .4 arrangements and equipment test program.

4.1.5 Documentation on stability.

4.1.5.1 Requirements for documentation on stability are specified in 1.4.7 of Part IV "Stability" the MODU/FOP Rules.

4.1.6 Documentation on subdivision:

- .1 calculation of buoyancy after flooding of a compartment:
- .2 calculation of damage trim and stability:
- .3 information on damage trim and stability accompanied by the plan of watertight compartments, arrangement of openings with indication of types of their closing appliances, as well as location of arrangements used for equalizing heel and trim.

4.1.7 Freeboard calculation.

4.1.8 Documentation on fire protection:

- .1 arrangement plan of fire-fighting divisions separating MODU/FOP on fire zones and other fire-resisting and fire-retarding divisions with indication of doors, closures, passages and ducts, etc.;
- **.2** MODU/FOP general arrangement plan with indication of routes of escape and emergency exits to the open deck;
- **.3** arrangement plan of fire extinguishing systems on MODU/FOP, fire control stations, stations for separate operational conditions:
 - .4 fire detection and fire alarm system and gas detection and alarm systems;
- **.5** diagrams and calculations of fire extinguishing systems (pumps, foam fire-fighting arrangements etc.);
- **.6** detailed description of fire protection of a drilling unit with indication of applied insulation and finishing materials, places of their application and their combustibility;
 - .7 data on combustibility of applied materials;

4.1.9 Documentation on machinery installation and boiler plants.

- **4.1.9.1** The following documentation shall be submitted during next approval of working plans:
- .1 technical documentation specified in 3.2.8.1 of Par I "Classification" of the Rules for the Classification to the extent applicable to MODU and drilling ship;

- .2 drawings of the main control stations for remote control of jacking system and fixing arrangements of self-elevating MODU, principal diagrams of control units with description of working principles, interlocking systems, protection and signalling;
 - .3 diagram of propeller control systems;
 - .4 drawings and calculation of the self-elevating MODU jacking mechanisms.
- **4.1.9.2** The following documentation is submitted without further approval of the working plans:
 - .1 documentation in accordance with 4.1.9.1 of this Part;
- **.2** documentation in accordance with 3.2.8.2 of Part I "Classification" of the Rules for the Classification as far as it may be applied to MODU, FOP and drilling ship.
 - 4.1.10 Documentation on automation equipment.
- **4.1.10.1** The following documentation shall be submitted during further approval of working plans:
- .1 technical documentation specified in 3.2.9.1 of Part I "Classification" of the Rules for the Classification as far as it may be applied to MODU, FOP or drilling ship;
- **.2** diagrams and drawings of automation systems of jacking mechanisms of self-elevating MODU;
- **.3** diagrams and drawings of automation systems of submersion and raising system of semi-submersible MODU:
- .4 diagrams and drawings of automation systems of submersible sea water pumps and of their lifting and lowering arrangements installed on self-elevating MODU;
- .5 diagrams and drawings of automation systems of windlasses, winches and other deck machinery;
- **.6** diagrams and drawings of MODU draft, heel, trim, etc., measuring and recording devices:
- **.7** diagrams and drawings of other automation systems of essential machinery and arrangements as required by the Register.
 - **4.1.10.2** The following documentation is submitted without further approval:
 - .1 documentation in accordance with 4.1.10.1 of this Part;
- **.2** documentation in accordance with 3.2.9.2 of Part I "Classification" of the Rules for the Classification as far as it is applicable to MODU, FOP or drilling ship.
 - 4.1.11 Documentation on systems and piping.
- **4.1.11.1** The following documentation shall be submitted for further approval of the working plans:
- .1 technical documentation specified in 3.2.10.1 of Part I "Classification" of the Rules for the Classification as far as it may be applied to MODU, FOP and drilling ship;
- **.2** hydraulic system diagram for drives of self-elevating MODU jacking mechanisms and fixing arrangements:
- **.3** hydraulic system diagram for lifting and lowering mechanisms of columns of submersible pump;
 - .4 self-elevating MODU sea water supply system diagram;
 - .5 diagram of system for loading and transfer of fuel for helicopters;
- **.6** ventilation system diagram with indication of watertight and fire-fighting bulkheads, location of fire dampers, ventilation capacity and air changes per hour for some spaces and hazardous zones, as well as pressure in some rooms in these zones;
- .7 strength calculations for hydraulic system for drives of self-elevating MODU jacking mechanisms and fixing arrangements;
 - .8 drilling mud emergency discharge system.
- **4.1.11.2** The following documentation is submitted without further approval of the working plans:
 - .1 documentation in accordance with 4.1.11.1 of this Part;

- .2 documentation in accordance with 3.2.10.2 of Part I "Classification" of the Rules for the Classification as far as it may be applied to MODU, FOP and drilling ship;
 - .3 layout diagram for technological complex systems.

4.1.12 Documentation on electrical equipment

- **4.1.12.1** The following documents shall be submitted during further approval of the working documentation:
- .1 technical documentation specified in 3.2.11.1 of Part I "Classification" of the Rules for the Classification as far as it may be applied to MODU, FOP and drilling ship;
 - .2 diagrams and drawings of electric drives of jacking system of self-elevating MODU;
- **.3** diagrams and drawings of electric drives of raising and submersion system of semisubmersible MODU:
- **.4** diagrams and drawings of electric drives of lifting/lowering arrangements of submersible sea water pumps and jacking system of self-elevating MODU;
- .5 diagrams and drawings of alarm systems specified in Section 7 of Part X "Electrical Equipment" of the MODU/FOP Rules;
- **.6** plan of dividing the unit into hazardous zones with a register of electrical equipment, including a brief description of the equipment, applicable degree of protection and ratings, installed in each zone with indication of closures of some rooms;
 - .7 diagram of emergency selective de-energizing of the electric drives.
 - **4.1.12.2** The following drawings are submitted without further approval:
 - .1 documentation in accordance with 4.1.12.1 of this Part;
- **.2** documentation in accordance with 3.2.11.2 of Part I "Classification" of the Rules for the Classification as far as it is applicable to MODU, FOP and drilling ships.

4.1.13 Documentation on submarine cable lines.

In case of installation of MODU/FOP power and/or control and instrumentation, and/or telecommunication and data cables for submarine use, the following documentation on laying of cables shall be submitted for review and approval:

- .1 equipment specifications;
- .2 calculation results of cross-sections of cables with indication of their types, currents and protection;
 - .3 results of mechanical calculations of cable loads caused by all possible effects;
 - .4 technological and constructive decisions:
 - .5 plans and longitudinal profiles of cable lines routing;
 - .6 commissioning, operating, maintenance and decommissioning manual.

4.2 TECHNICAL DESIGN DOCUMENTATION FOR CONVERSION OR RECONSTRUCTION

- **4.2.1** Before conversion or reconstruction of the drilling unit the documentation for those parts of hull, machinery and equipment of the drilling unit which are subject to conversion and reconstruction shall be submitted to the Register Head Office for review and approval.
- **4.2.2** If a new machinery and arrangements significantly varying from those initial ones and covered by the requirements of the MODU/FOP Rules are mounted on the drilling unit which is in operation it is necessary to submit to the Register an additional technical documentation on these new machinery and installations for review and approval in the scope required for the drilling unit under construction (refer to 4.1).

4.3 WORKING PLANS FOR MODU/FOP UNDER CONSTRUCTION

4.3.1 When specifying the scope of working design documentation to be submitted for review to the RS Branch Office carrying out technical supervision during construction of MODU/FOP, the applicable requirements of Section 3 of Part I "Classification" of the Rules for the Classification shall be met taking into account the MODU/FOP features specified in <u>4.1</u> of this Part. For those types of MODU and FOP for which the requirements are missing or partially available in the MODU/FOP Rules, additional documents or data may be required as deemed necessary by the Register.

Russian Maritime Register of Shipping

Rules for the Classification, Construction and Equipment of Mobile Offshore Drilling Units and Fixed Offshore Platforms
Part I
Classification

FAI "Russian Maritime Register of Shipping" 8, Dvortsovaya Naberezhnaya, 191186, St. Petersburg, Russian Federation www.rs-class.org/en/