

RULES

FOR THE CLASSIFICATION AND CONSTRUCTION OF FLOATING OFFSHORE OIL-AND-GAS PRODUCTION UNITS

PART I CLASSIFICATION

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RULES FOR THE CLASSIFICATION AND CONSTRUCTION OF FLOATING OFFSHORE OIL-AND-GAS PRODUCTION UNITS

Rules for the Classification and Construction of Floating Offshore Oil-and-Gas Production Units (FPU) of Russian Maritime Register of Shipping (RS, the Register) have been approved in accordance with the established approval procedure. The date of coming into force of the present Rules is 1 January 2022.

The present Rules set forth specific requirements for FPU, consider the recommendations of the IMO Code for the Construction and Equipment of MODU, as adopted by the IMO Assembly on 19 October 1989 (IMO resolution A.649(16)), take account of international practice of FPU construction and operation, requirements of the rules of the IACS members, international standards, as well as experience of Russian Maritime Register of Shipping relating to the classification and construction of ships, mobile offshore drilling units and fixed offshore platforms, stated in the relevant rules.

The Rules are published in the following parts:

Part I "Classification";

Part II "Hull";

Part III "Equipment, Arrangements and Outfit";

Part IV "Stability";

Part V "Subdivision";

Part VI "Fire and Explosion Protection";

Part VII "Machinery Installations";

Part VIII "Systems and Piping";

Part IX "Machinery";

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

Part XI "Electrical Equipment";

Part XII "Refrigerating Plants";

Part XIII "Materials";

Part XIV "Welding";

Part XV "Automation";

Part XVI "General Requirements and Safety Principles".

The present Rules supplement the Rules for the Classification and Construction of Sea-Going Ships, Rules for the Equipment of Sea-Going Ships and Rules for the Classification, Construction and Equipment of Mobile Offshore Drilling Units and Fixed Offshore Platforms.

REVISION HISTORY

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

For this version, there are no amendments to be included in the Revision History.

1 GENERAL

1.1 APPLICATION

1.1.1 The Rules for the Classification and Construction of Floating Offshore Oil-and-Gas Production Units¹ cover the following types of self-propelled and non-self-propelled floating offshore structures:

floating production, storage and offloading units depending on the flow chart chosen;
single point moorings.

Mobile offshore drilling units, fixed offshore platforms and drilling ships shall meet the requirements of the Rules for the Classification, Construction and Equipment of Mobile Offshore Drilling Units and Fixed Offshore Platforms² of the Register.

1.1.2 Technical requirements apply to machinery, arrangements, instruments and equipment installed on floating offshore structures, except for structures, machinery, arrangements, instruments and equipment of systems for production, treatment and processing of products, technical requirements to which are set forth in the Rules for the Oil-and-Gas Equipment of Floating Offshore Oil-and-Gas Production Units, Mobile Offshore Drilling Units and Fixed Offshore Platforms.

1.1.3 The equipment, machinery and piping of the floating offshore oil-and-gas production unit (FPU), which ensure its operation as a floating offshore structure, shall meet the requirements of the Rules for the Classification and Construction of Sea-Going Ships³ and the MODU/FOP Rules of the Register to the extent that they are applicable and sufficient, unless otherwise specified.

1.1.4 The materials, products, welding and inspection of welded joints used for hull structures, machinery and equipment parts shall comply with the Rules for the Classification and the MODU/FOP Rules to the extent that they are applicable and sufficient.

¹ Hereinafter referred to as "the FPU Rules".

² Hereinafter referred to as "the MODU/FOP Rules".

³ Hereinafter referred to as "the Rules for the Classification".

1.2 DEFINITIONS AND EXPLANATIONS

1.2.1 For the purpose of the FPU Rules, the following definitions have been adopted.

Accommodation area is the FPU area used for the crew and special personnel accommodation.

Bridle is a chain cable connecting a ship or a mooring buoy to an anchor. Combined bridle is a bridle with intermediate chain lengths (between the inner end and anchor chain lengths) replaced with the wire rope ones.

Floating offshore oil-and-gas production unit (FPU) is a floating offshore ship-, pontoon- or otherwise-shaped structure provided with a position-keeping system and intended for performing one or several functions: production, intake, storage, processing and offloading of products.

Floating production and offloading unit (FPO) is a floating offshore structure intended for intake, processing and offloading of products.

Floating production, storage and offloading unit (FPSO) is a floating offshore self-propelled or non-self-propelled structure intended for intake, processing, storage and offloading of products.

Floating single point mooring (FSPM) is a floating offshore structure intended for mooring tankers or FPU and for offloading of products at sea or at anchorage.

Floating storage and offloading unit (FSO) is a floating offshore self-propelled or non-self-propelled structure intended for intake, storage and offloading of products.

Multiphase (multilevel) swivel is a rotating device, which provides transfer of products, other media (water, gas, etc.), as well as electric power, monitoring and control signals between its rotating and stationary parts.

Process area is the FPU area wherein the equipment for intake, processing, storage and offloading of products is installed.

Products are crude hydrocarbons in the form of oil, natural or oil gas and gas condensate.

Riser is a structure composed of a rigid or flexible pipeline which connects the equipment of underwater production system or subsea pipeline manifold with FPU or a single point mooring for product transportation.

Stationary single point mooring (SSPM) is an offshore structure installed on the seabed and intended for mooring tankers or FPU and for offloading of products at sea or at anchorage.

Turret is a device providing FPU and FSPM connection and enabling FPU to rotate around FSPM, as well as to transport products and other media via the multiphase swivel.

2 CLASS OF FPU

2.1 GENERAL

2.1.1 FPU are covered by the requirements of 2.1 of Part I "Classification" of the Rules for the Classification.

2.2 CLASS NOTATION

2.2.1 The class notation assigned by the Register to a floating offshore structure consists of the character of classification, distinguishing marks and descriptive notations defining design and purpose of a floating offshore structure.

2.2.2 Floating structures complying with the requirements of Section 2 of Part I "Classification" of the Rules for the Classification are assigned one of the following descriptive notations added to the character of classification, namely: **FPO**, **FPSO**, **FSO**, **FSPM** or **SSPM**, depending on the flow chart chosen and subject to compliance with the requirements of the FPU Rules.

For self-propelled ships, when adding descriptive notations to the character of classification such as **FSO** or **FPSO**, the sign (**ESP**) shall be mandatory added after the descriptive notation. This means the necessity to survey these ships based on the Enhanced Survey Programme.

2.2.3 If a ship is intended for periodical operation at fixed location in regasification and gas offloading mode or gas intake, processing, liquefaction and storage mode, when one descriptive notation from those specified in [2.2.2](#) is assigned, the descriptive notation **gas carrier** shall be also added to the character of classification. This ship shall meet the requirements of the Rules for the Classification and Construction of Ships Carrying Liquefied Gases in Bulk and the Rules for the Classification and Construction of Ships Carrying Compressed Natural Gas to the extent that is practicable and reasonable.

3 TECHNICAL DOCUMENTATION

3.1 General provisions pertinent to the review and approval of technical documentation on FPU, materials and products are given in Section 3 of Part I "Classification" of the Rules for the Classification and in Section 4 of Part I "Classification" of the MODU/FOP Rules.

3.2 The design documentation for ship under construction, technical design documentation, as well as working documentation for FPU under construction shall be submitted to the Register for review and approval in accordance with the requirements of Section 3, Part I "Classification" of the Rules for the Classification and Section 4, Part I "Classification" of the MODU/FOP Rules to the extent that is applicable to FPU.

3.3 Technical documentation reflecting the specific feature of FPU shall be additionally submitted, namely:

area and conditions of operation, anchorage system (in accordance with 4.1.2 — 4.1.12, Part I "Classification" of the MODU/FOP Rules);

drawings and diagrams of an offloading system, hull structures in way of production complexes, of a turret, torch, an integrated automatic control system, a mooring arrangement, helideck equipment.

3.4 Prior to the commencement of work on conversion/modernization of FPU, technical documentation for those parts of the hull, machinery and equipment of FPU, which are liable to conversion/modernization, shall be submitted to the Register for review.

3.5 When fitting new machinery or arrangements on FPU in operation, which meet the requirements of the FPU Rules and differ substantially from those fitted initially, the additional technical documentation concerning the items of new equipment shall be submitted to the Register for review.

3.6 Upon completion of construction, trials and commissioning of FPU, the final documentation shall be submitted to the Register.

The amount of the documentation and the order of its submission shall be agreed upon with the Register prior to completion of the FPU construction.

4 SURVEY PROCEDURE AND SCOPE

4.1 The following types of surveys are performed by the Register:

.1 initial surveys:

initial survey during construction under the Register technical supervision,
initial survey during construction under the supervision of another classification
society (ACS) or any other competent body, or without the ACS supervision,
initial survey in service;

.2 periodical surveys in service as follows:

special surveys;
annual surveys;
survey of the outside of the ship's bottom;
intermediate surveys;

.3 occasional surveys in service.

4.2 Survey of FPU in service shall be carried out in compliance with the requirements of Section 2 of the General Regulations for the Classification and Other Activity, Section 3, Part I "Classification" of the MODU/FOP Rules, and of the Rules for the Classification Surveys of Ships in Service and the Guidelines on Technical Supervision of Ships in Service to the extent that is practicable and reasonable, unless otherwise specified.

4.3 During construction, the FPU 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 [Section 3](#)) approved by the Register.

4.4 Date of the FPU survey upon construction is the date of the actual completion of the survey and issue of a Classification Certificate and ship's documents for FPU.

Russian Maritime Register of Shipping

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