



**RULES
FOR THE CLASSIFICATION AND CONSTRUCTION
OF MOBILE OFFSHORE DRILLING UNITS**

**PART I
CLASSIFICATION REGULATIONS**

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GDAŃSK

RULES FOR THE CLASSIFICATION AND CONSTRUCTION OF MOBILE OFFSHORE DRILLING UNITS

prepared and edited by Polish Register of Shipping*, hereinafter referred to as PRS, consist of the following Parts:

- Part I – Classification Regulations
- Part II – Construction, Strength and Materials – under development
- Part III – Subdivision, Stability and Freeboard – under development
- Part IV – Machinery Installations
- Part V – Fire Safety
- Part VI – Electrical Installations
- Part VII – Helicopter Facilities – under development

however, “Materials and welding” shall comply with the applicable requirements of *Part IX – Materials and Welding of the Rules for the Classification and Construction of Sea-going Ships*.

This *Part I – Classification Regulations* – January 2024 was approved by the PRS Board on 21 December 2023 and enters into force on 1 January 2024

The following *Publications* are an extension and supplement to this *Part I*:

- Publication 2/P – Alternative Survey Arrangements for Machinery,
- Publication 49/P – Requirements Concerning Mobile Offshore Drilling Units,
- Publication 51/P – Procedural Requirements for Service Suppliers,
- Publication 52/P – Underwater Inspection of Mobile Offshore Drilling Units in Lieu of Drydocking Survey,
- Publication 54/P – Alternative Hull Survey Arrangements,
- Publication 97/P – Transfer of Class and Adding, Maintaining or Withdrawing Double or Dual Class,
- Publication 99/P – Guidelines for the Survey of Offshore Mooring Chain Cable in Use,
- Publication 111/P – Periodical Surveys of Propeller Shaft,
- Publication 120/P – Requirements for Vessels and Units with Dynamic Positioning (DP) Systems,
- Publication 123/P – Safe Entry to Confined Spaces,
- Publication 18/I – Guidelines for Non-Destructive Tests of the Underwater Part of Mobile Offshore Drilling Units,
- Publication 29/I – Guidelines for Periodic Inspections of Fire-Extinguishing Systems and Appliances Used on Ships.

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1 GENERAL

1.1 Scope of Application

1.1.1 *Rules for the Classification and Construction of Mobile Offshore Drilling Units*, hereinafter referred to as the *Rules*, apply to the following types of mobile offshore drilling units:

- .1 self-elevating drilling units (see definition in 1.2.35);
- .2 column-stabilized drilling units (see definition in 1.2.8);
- .3 surface type drilling units (see definition in 1.2.41).

1.1.2 The present *Rules* apply to drilling units, as well as (within applicable scope) to other units that do not fall into this category but which have configuration similar to drilling units and are intended for similar operations, e.g. exploitation of minerals.

1.1.3 Requirements of the present *Part I* of the *Rules* apply to both drilling units under construction and to existing units.

1.1.4 The present *Rules* specify the requirements upon meeting which a unit may be assigned PRS class.

1.1.5 The requirements contained in this *Part I* apply to surveys of hull, structure, equipment and machinery subject to classification. (IACS UR Z15/1.1.2)

1.1.6 The thickness measurements requirements (contained in IACS UR Z7) have been adapted and incorporated into Appendix B, Table I, of this *Part I*. (IACS UR Z15/1.1.3)

1.1.7 Requirements regarding machinery installations, fire protection and electrical installations have been included in *Parts IV, V* and *VI*, while the requirements regarding the structure, subdivision and stability of MODU Units temporarily in *Publication 49/P*, until the development of *Parts II* and *Part III* is completed.

1.2 Definitions

For the purposes of this *Part I*, the following definitions apply:

1.2.1 *Administration* – the Government of the State whose flag the unit is entitled to fly.

1.2.2 *Alteration of the unit* – activities aimed at the change of the drilling unit's scantlings or/and the unit's purpose.

1.2.3 *Ballast tank* – a tank which is used primarily for salt water ballast. (IACS UR Z15/1.2.1)

1.2.4 *Breadth of drilling unit (B)*:

- for **self-elevating units and column-stabilized units** – the length between the extremities of the unit orthogonal projection perpendicular to its centreline, measured along the line perpendicular to the centreline;
- for **surface drilling units** – the greatest breadth of the unit measured between the outer edges of frames.

1.2.5 *Classification cycle* – a cyclical period starting from the date of completion of the initial survey for assignment of class, carried out after the unit's construction completion or from the date of Class Renewal Survey completion, equal to class validity period (in general 5 years) and covering all due periodical surveys.

1.2.6 *Close-up survey* – a survey where the details of structural components are within the close visual inspection range of the surveyor i.e. normally within reach of hand. (IACS UR Z15/1.2.5)

1.2.7 *Coating condition* – is defined as follows:

GOOD condition with only minor spot rusting.

FAIR condition with local breakdown at edges of stiffeners and weld connections and/or light rusting over 20% or more of areas under consideration, but less than as defined for POOR condition.

POOR condition with general breakdown of coating over 20% or more of areas or hard scale at 10% or more of areas under consideration. (IACS UR Z15/1.2.4)

1.2.8 *Column-stabilized unit* – a unit with the main deck connected to the underwater hull or footings by columns.

Column stabilized drilling units depend upon the buoyancy of widely spaced columns for flotation and stability for all afloat modes of operation or in the raising or lowering of the unit, as may be applicable. The columns are connected at their top to an upper structure supporting the drilling equipment. Lower hulls or footings may be provided at the bottom of the columns for additional buoyancy or to provide sufficient area to support the unit on the sea bed. Bracing members of tubular or structural sections may be used to connect the columns, lower hulls or footings and to support the upper structure.

Drilling operations may be carried out in the floating condition, in which condition the unit is described as a semisubmersible, or when the unit is supported by the sea bed, in which condition the unit is described as a submersible. A semisubmersible unit may be designed to operate either floating or supported by the sea bed, provided each type of operation has been found to be satisfactory. (IACS UR D2/2.2)

1.2.9 *Corrosion prevention system* – normally considered a full hard protective coating. Hard Protective Coating is usually to be epoxy coating or equivalent. Other coating systems, which are neither soft nor semi-hard coatings, may be considered acceptable as alternatives provided that they are applied and maintained in compliance with the manufacturer's specifications. (IACS UR Z15/1.2.12)

1.2.10 *Critical structural area* – locations which have been identified from calculations to require monitoring or from the service history of the subject Unit or from similar Units or sister Units, if applicable, to be sensitive to cracking, buckling or corrosion which would impair the structural integrity of the unit. (IACS UR Z15/1.2.8)

1.2.11 *Date of contract for construction* – unless specified otherwise:

- .1 the date of contract for construction of a drilling unit is the date on which the contract to build the unit is signed between the prospective Owner and the builder. This date is normally to be declared to PRS by the party applying for the assignment of class to a new building;
- .2 the date of contract for construction of a series of sister drilling units, including specified option units for which the option is included in the contract, is the date on which the contract to build the series is signed between the prospective Owner and the builder. The optional units will be considered part of the same series of sister units if the option is exercised not later than 1 year after the contract to build the series was signed;
- .3 if a contract for construction is later amended to include additional units or additional options, the date of contract for construction of such units is the date on which the amendment to the contract is signed between the prospective Owner and the builder. The amendment to the contract shall be considered as a new contract to which the definitions given in .1 and .2 apply.

1.2.12 *Depth of the unit (H)* – the vertical distance measured amidships from the base plane to the top of the uppermost continuous deck beam at side.

1.2.13 *Diving system* – the plant and equipment necessary for the safe conduct of diving operations from a mobile offshore drilling unit.

1.2.14 *Downflooding* – any flooding of the interior of any part of the buoyant structure of a drilling unit through openings which cannot be closed watertight or weathertight, as appropriate, in order to meet the intact or damage stability criteria, or which are required for operational reasons to be left open.

1.2.15 *Drilling fluid (Drilling mud)* – liquid or gas, indispensable for the unit's drilling operations, used to lubricate the drilling bit and convey drill cuttings to the surface.

1.2.16 *Drilling operations (operation process)* – drilling activities, extraction of submarine resources or other activities directly associated with the unit operating condition.

1.2.17 *Enclosed spaces* – spaces delineated by floors, bulkheads and/or decks, which may have doors or windows.

1.2.18 *Examination* – includes:

- *external examination* – a visual inspection of structure, machinery or equipment, without dismantling, to provide a general assessment of their condition and to determine, where necessary, the scope of an additional close-up examination.
- *internal examination* – a visual examination of structure, machinery or equipment in dismantled condition (partially or wholly) or a visual examination of an arrangement (boilers, pressure vessels) from the inside, aimed at the assessment of their condition and determination, where necessary, the scope of an additional close-up examination.
- *close-up examination* – a survey where the details of structure, machinery or equipment are subject to close visual inspection by the Surveyor, i.e. normally within the Surveyor's hand reach and possible hammer, magnifying glass, etc. testing.

1.2.19 *Exceptional circumstances* – the term means unavailability of dry docking facilities; unavailability of repair facilities; unavailability of essential materials, equipment or spare parts; delays incurred by action taken to avoid severe weather conditions.

1.2.20 *Excessive diminution* – an extent of corrosion beyond allowable limits. (IACS UR Z15/1.2.11)

1.2.21 *Hazardous area* – all those areas where, due to the possible presence of a flammable atmosphere arising from the drilling operations, the use without proper consideration of machinery or electrical equipment may lead to fire hazard or explosion. (MODU Code, 1.3.37)

Division of hazardous areas into zones and classification of these zones - see chapter 3 of Part VI of the Rules.

1.2.22 *Length of the unit (L)*:

- for self-elevating units and column-stabilized units – the length between the extremities of the unit orthogonal projection on its centreline measured along the line parallel to the moulded base plane;
- for surface units – 96% of the total length on a waterline at 85 % of the moulded depth, measured from the base plane, or the length from the fore-side of the stem to the axis of the

rudder stock on that waterline, if that be greater. In **units** designed with a rake of keel, the waterline on which this length is measured shall be parallel to the design waterline.

1.2.23 *Lightweight* – the weight of the complete unit in tonnes, with all its permanently installed machinery, equipment and outfit, including permanent ballast, spare parts normally retained on board and liquids in machinery and piping to their normal working levels, but does not include liquids in storage or reserve supply tanks, items of consumable or variable loads, stores or crew and their effects. (IACS UR D2/2.6)

1.2.24 *Mobile offshore drilling unit (MODU), or unit* – any mobile offshore structure or vessel whether designed for operation afloat or supported by the sea bed, capable of engaging in drilling operation for the exploration and/or exploitation of resources beneath the seabed such as liquid or gaseous hydrocarbons, sulphur or salt.

1.2.25 *Mode of operation* – a condition or manner in which a drilling unit may operate or function while on location or in transit. For the purpose of these *Rules* the modes of operation include the following:

- .1 *operating conditions* – conditions wherein a drilling unit is on location for the purpose of conducting drilling operations, and combined environmental and operational loading are within the appropriate design limits established for such operations. The unit may be either afloat or supported on the seabed, as applicable;
- .2 *severe storm conditions* – conditions wherein a drilling unit may be subjected to the most severe environmental loadings for which it is designed. Drilling operations are assumed to have been discontinued due to the severity of the environmental loading. The unit may be either afloat or supported on the seabed, as applicable;
- .3 *transit conditions* – conditions wherein a drilling unit is moving from one geographical location to another.

1.2.26 *Moulded base plane* – a horizontal line extending through the upper surface of the bottom plating.

1.2.27 *Moulded draught (T)* – the vertical distance measured from the moulded base plane to the assigned load waterline. Certain components of a drilling unit's structure, machinery or equipment may extend below the moulded base plane.

1.2.28 *Normal operational and habitable conditions* – means:

- .1 conditions under which the unit as a whole, its machinery, services, means and aids ensuring safe navigation when underway, safety when in the industrial mode, fire and flooding safety, internal and external communications and signals, means of escape and winches for rescue boats, as well as the means of ensuring the minimum comfortable conditions of habitability, are in working order and functioning normally; and
- .2 drilling operations. (MODU Code, 1.3.44)

1.2.29 *Preload tank* – a tank within the hull of a self-elevating unit. These tanks are periodically filled with salt water ballast and used to preload the footings of the unit prior to commencing drilling operations. Preload Tanks are considered equivalent to Ballast Tanks. (IACS UR Z15/1.2.2)

1.2.30 *Prompt and thorough repair* – 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 condition of classification. (IACS UR Z15/1.2.130)

1.2.31 *Propulsion assist units* – are non-self-propelled Units fitted with thrusters intended to assist manoeuvring or propelling while under tow. (IACS UR Z15/1.2.15)

1.2.32 *Protective coatings* – coatings ensuring protection of a steel structure surfaces against corrosion, usually epoxy or equivalent. Other type of coatings may be accepted, provided they are applied and maintained in accordance with the conditions specified by the manufacturer. Protective coatings are divided into:

- .1 *soft protective coatings* – coatings that are always remains soft and may be damaged by walking, touching, erosion, etc. This coatings are based on lanolin, vegetable oil or other organic or inorganic substances.
- .2 *semi-hard protective coatings* – coatings which, when drying, change their properties in such a way that they remain flexible and retain their ability to protect corrosion for a period of at least 3 years.
- .3 *hard protective coatings* – coatings that remains hard at all time, usually epoxy or equivalent.

1.2.33 *Remote Inspection Techniques (RIT)* – a means of survey that enables examination of any part of the structure without the need for direct physical access of the Surveyor. (refer to IACS REC 42) (IACS UR Z15/1.2.16)

1.2.34 *Representative spaces* – those spaces (hull compartments, tanks, etc.) which are expected to reflect the conditions of other spaces of similar type and service and with similar corrosion prevention system. When selecting *representative spaces*, account is to be taken of the service and repair history on the unit and identifiable *critical structural areas* and/or *suspect areas*. (IACS UR Z15/1.2.7)

1.2.35 *Self-elevating unit* – a unit with movable legs capable of raising its hull above the surface of the sea and lowering it back into the sea.

Self-elevating drilling units have hulls with sufficient buoyancy to safely transport the unit to the desired location, after which the hull is raised to a predetermined elevation above the sea surface on its legs, which are supported on the sea bed. Drilling equipment and supplies may be transported on the unit, or may be added to the unit in its elevated position. The legs of such units may penetrate the sea bed, may be fitted with enlarged sections or footings to reduce penetration, or may be attached to a bottom pad or mat. (IACS UR D2/2.1)

1.2.36 *Semi-enclosed locations* – are locations where natural conditions of ventilation are notably different from those on open decks due to the presence of structures such as roofs, windbreaks and bulkheads and which are so arranged that dispersion of gas may not occur.

1.2.37 *Sister units* – units built to the same approved plans for classification purposes which may have minor design alterations, provided that such alterations do not affect the matters related to classification.

1.2.38 *Spaces* – are separated compartments. (IACS UR Z15/1.2.3)

1.2.39 *Special consideration* – means sufficient close-up inspection and thickness measurements are to be taken to confirm the actual average condition of the structure under the protective coating. (IACS UR Z15/1.2.14)

1.2.40 *Substantial corrosion* – an extent of corrosion such that assessment of corrosion pattern indicates wastage in excess of 75% of allowable margins, but within acceptable limits. (IACS UR Z15/1.2.10)

1.2.41 *Surface-unit* – a unit with a ship- or barge-type displacement hull of single or multiple hull construction intended for operation in the floating condition.

Surface type drilling units:

- .1** ship type drilling units are seagoing ship-shaped units having a displacement-type hull or hulls, of the single, catamaran or trimaran types, which have been designed or converted for drilling operations in the floating condition. Such types have propulsion machinery.
- .2** barge type drilling units are seagoing units having a displacement type hull or hulls, which have been designed or converted for drilling operations in the floating condition. These units have no propulsion machinery. (IACS UR D2/2.3)

1.2.42 *Survey* – a set of activities relating to a unit, its machinery, appliances, equipment, etc. realized through review of technical documentation, as well as carrying out appropriate examinations, measurements and tests.

1.2.43 *Suspects area* – locations showing substantial corrosion and/or are considered by PRS Surveyor to be prone to rapid wastage. (IACS UR Z15/1.2.9)

1.2.44 *Transverse section* (girth belt) – a section which includes all continuous longitudinal members, such as plating, longitudinals and girders at the deck, sides, bottom, inner bottom and longitudinal bulkheads at a given section of the unit. (IACS UR Z15/1.2.6)

1.2.45 *Water depth* – the vertical distance from the sea bed to the mean low water level, increased by the height of astronomical and stormy tides.

1.2.46 *Watertight* – means the capability of preventing the passage of water through the structure in any direction under a head of water for which the surrounding structure is designed. (MODU Code, 1.3.58, IACS UR D2/2.8)

1.2.47 *Weathertight* – means that in any sea conditions water will not penetrate into the unit. (MODU Code, 1.3.59, IACS UR D2/2.7)

1.3 Repairs

1.3.1 If during the survey any damage in association with wastage over the allowable limits (including buckling, grooving, detachment or fracture) or extensive areas of wastage over the allowable limits is found, which affects or, in the opinion of PRS Surveyor, will affect drilling unit's structural, watertight or weathertight integrity, is to be promptly and thoroughly (see 1.2.31) repaired.

For survey locations where adequate repair facilities are not available, consideration may be given to allow the drilling unit to proceed directly repair facility. This may require temporary repairs for the intended voyage. (IACS UR Z15/1.3.1)

1.3.2 Additionally, when a survey results in the identification of structural defects or corrosion, either of which, in the opinion of PRS Surveyor, will impair the drilling unit's fitness for continued service, remedial measures are to be implemented before the unit continues in service. (IACS UR Z15/1.3.2)

1.3.3 Where the damage mentioned in par. 1.3.1 is isolated and of a localised nature which does not affect the drilling unit's structural integrity, consideration may be given by the surveyor to allow an appropriate temporary repair to restore watertight or weathertight integrity and issue a condition of class, in accordance with IACS PR 35, with a specified time limit for execution. (IACS UR Z15/1.3.3)

1.3.4 Where repairs of the drilling unit structure, machinery or essential equipment are to be carried out during operation, they shall be performed only upon consent and under conditions agreed with PRS. In such cases, the Owner is obliged to submit to PRS, for acceptance, the repairs programme. Failure to agree, in advance, the repairs may result in suspension of the drilling unit's class. The Owner who plans such repairs is obliged to submit, to PRS, the repairs programme determining the object of repairs, the repairs' extent and technology, and the repairs' performer, as well as to agree the date and scope of the survey after repairs.

In justified cases, PRS Surveyor's attendance, during repairs, may be required. An agreement is not required in the case of maintenance and overhaul to hull, machinery and equipment in accordance with the manufacturer's recommended procedures and established marine practice.

In addition, any not planned repairs, made during operation, which affect or may affect the drilling unit's class, shall be noted in the pertinent documents and submitted, as soon as possible, to PRS for the purpose of determining the scope of survey connected with the drilling unit's class.

All structural repairs and renovations of machinery and equipment affecting the technical condition of the unit shall be performed by service suppliers approved by PRS in accordance with *Publication 51/P (IACS UR Z17)*.

At the shipowner's request, the PRS Surveyor may, in justified cases, accept to the performance of such works by a service supplier not approved by PRS, on a single approval basis, after verifying its ability to properly perform these activities.

All the above-mentioned activities, performed by the service suppliers, are subject to verification by a PRS Surveyor.

1.3.5 In the case of repairs to the coating in ballast tanks, holds and on drilling unit underwater part plating, the Owner is obliged to submit, to PRS, document confirming that the coating was applied in accordance with the manufacturer's recommendations. In the case of routine maintenance work carried out by the drilling unit's crew, submission of an Owner's report is required.

1.3.6 Thickness measurements of the drilling unit structural elements, if not carried out by PRS itself, shall be witnessed by PRS Surveyor to the extent necessary to control the process. A meeting, prior to the commencement of the thickness measurements, shall be attended by PRS Surveyor, the Owner's representative and the representative of the thickness measurement firm. During the meeting, communication between parties involved in the thickness measurements shall be agreed.

Thickness measurements of the drilling unit structural members required for Class Renewal Survey shall be carried out, where practicable, in advance, but not before the Annual Survey preceding Class Renewal Survey.

The service suppliers performing the measurements shall be approved by PRS in accordance with *Publication 51/P (IACS UR Z17)*.

1.4 Remote Inspection Techniques (RIT)

1.4.1 The RIT is to provide the information normally obtained from a close-up survey. RIT surveys are to be carried out in accordance with the requirements given here-in and the requirements of IACS REC 42 – *Guidelines for Use of Remote Inspection Techniques for Surveys*. These considerations are to be included in the proposals for use of a RIT which are to be submitted in advance of the survey so that satisfactory arrangements can be agreed with PRS. (IACS UR Z15/1.4.1)

1.4.2 The equipment and procedure for observing and reporting the survey using a RIT are to be discussed and agreed with the parties involved prior to the RIT survey, and suitable time is to be allowed to set-up, calibrate and test all equipment beforehand. (IACS UR Z15/1.4.2)

1.4.3 When using a RIT as an alternative to close-up survey, if not carried out by the PRS itself, it is to be conducted by a firm approved as a service supplier according to *Publication 51/P* (IACS UR Z17) and is to be witnessed by an attending PRS Surveyor. (IACS UR Z15/1.4.3)

1.4.4 The structure to be examined using a RIT is to be sufficiently clean to permit meaningful examination. Visibility is to be sufficient to allow for a meaningful examination. PRS is to be satisfied with the methods of orientation on the structure. (IACS UR Z15/1.4.4)

1.4.5 The Surveyor is to be satisfied with the method of data presentation including pictorial representation, and a good two-way communication between the Surveyor and RIT operator is to be provided. (IACS UR Z15/1.4.5)

1.4.6 If the RIT reveals damage or deterioration that requires attention, the Surveyor may require traditional survey to be undertaken without the use of a RIT. (IACS UR Z15/1.4.6)

2 SCOPE OF SUPERVISION

2.1 PRS classification *supervision*, based on the principles and requirements specified in *this Part I*, covers:

- .1 materials used in the construction and equipment of a drilling unit,
- .2 *structure* strength,
- .3 welding,
- .4 *stability*, intact and damaged,
- .5 watertight and weathertight integrity,
- .6 temporary and emergency mooring equipment,
- .7 jacking *system* of self-elevating units,
- .8 propulsion machinery, *including shafts and propellers*,
- .9 steering gear *and rudders*,
- .10 auxiliary machinery,
- .11 *pumping and* piping systems, including *valves*,
- .12 boilers and pressure vessels,
- .13 *electrical* installations,
- .14 protection against fire and explosion, (IACS UR D1/1.3)
- .15 *ice strengthening construction*, (IACS UR D1/1.4)
- .16 *temporary or emergency mooring equipment*, (IACS UR D1/1.5)
- .17 *position keeping systems and components*, (IACS UR D1/1.6)
- .18 sea pollution prevention arrangement,
- .19 ventilation *systems*;
- .20 *helicopter facilities*,
- .21 special arrangements, machinery and systems associated with the unit drilling operations:
 - special hull *structures*,
 - boilers,
 - pressure vessels,
 - compressors.

2.2 The items, specified below, are not subject to PRS *supervision* and are not covered by the present *Rules*:

- .1 structural details of industrial items used exclusively in drilling or related operations,
- .2 machinery, electrical and piping systems used exclusively for industrial purposes, except in so far as their design or arrangement may affect the safety of the drilling unit,
- .3 determination of the adequacy of sea bed conditions, regarding load bearing capacity, resistance to possible sliding and anchor holding capability,
- .4 assessment of the required holding capacity, arrangement and operation of position mooring equipment and dynamic positioning equipment used for station-keeping activities in connection with the drilling unit operations which is the responsibility of the Owner. (IACS UR D1/1.3)

2.3 Novel features

Units which contain novel features of design, with respect to buoyancy, elevating arrangements, structural arrangements, machinery, equipment, etc., to which the *Rules* requirements are not directly applicable, may be classed, when approved by PRS 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. (IACS UR D1/2.1)

2.4 Materials

The *Rules* requirements are intended for units to be constructed of materials manufactured and tested under PRS supervisions. Where it is intended to use materials manufactured by different processes or having different properties, their use will be specially considered by PRS. (IACS UR D1/4.1)

2.5 Welding

Welding is to comply with the PRS *Rules*. PRS is to be satisfied that all welders to be employed in the construction of units to be classed are properly qualified in the type of work proposed and in the proper use of the welding processes and procedures to be followed. The methods and locations for non-destructive testing of welds are to be submitted to PRS. (IACS UR D1/5.1)

2.6 Testing

After completion of construction works of MODU unit, compartments, decks, bulkheads, etc. shall be non-destructive/ pressure tested, as applicable, in accordance with the test program, accepted by PRS. (IACS UR D1/1.6)

3 CLASS OF UNIT

3.1 General

3.1.1 PRS may assign a class to a new or an existing drilling unit, as well as to confirm, renew or reinstate class of an existing unit classed with PRS.

3.1.2 Assignment, confirmation and renewal of class, as well as class reinstatement means that the drilling unit, in full measure or to a degree considered by PRS acceptable, complies with the relevant requirements of the *Rules*.

3.1.3 Class of a drilling unit is assigned or renewed, for 5 years. In justified cases, having regard to the technical condition of the hull, machinery, electrical equipment or special arrangements, machinery and systems associated with drilling operations covered by PRS survey, PRS may assign a class to a drilling unit for a shorter period or may shorten the class validity as a result of

the Class Renewal Survey, inserting an appropriate additional mark in the symbol of class – see 3.2.8.

3.1.4 In exceptional cases, at the Owner's justified request, PRS may grant an extension of class validity not exceeding 3 months to allow the drilling unit to proceed to a location where it will be subjected to the due survey. The scope of such survey is specified by PRS in each particular case.

3.1.5 If, due to circumstances reasonably beyond the Owner's or PRS control, limited, however, to such cases as:

- unforeseen inability of PRS to carry out the due survey of the unit (the governmental restrictions on right of access or movement of personnel),
- unforeseeable mobile offshore drilling unit delay in location or inability to attend the unit due to unusually lengthy periods of severe weather, strikes or civil strife, acts of war or other force majeure,

the unit is not in a location, port, shipyard or other place where the overdue surveys can be completed by the expiry of periods allowed, PRS may, at the Owner's request, to maintain the unit's class validity, to an agreed location at which the survey will be completed, provided that:

- .1 the overdue surveys, within the greatest possible scope, are carried out at the first convenient location of call,
- .2 PRS is satisfied that the unit is in condition to sail and that the Owner acts in good faith.

If the drilling unit's class has been automatically suspended, it may be reinstated subject to compliance with the above requirements.

3.1.6 Machinery, electrical equipment and special arrangements covered by PRS survey are classed within the scope specified by PRS in each particular case. Class of machinery is confirmed by *Machinery Certificate*.

3.1.7 PRS may suspend or withdraw the drilling unit's class in cases specified in Chapters 6 and 7.

3.2 Main Symbol of Class and Symbol of Machinery

3.2.1 Main Symbol of Class of a Drilling Unit Built under PRS Survey

3.2.1.1 The main symbol of class of a drilling unit built under PRS survey consists of the mark * and the mark GKM or GK **affixed after it**:

* **GKM** – for **self-propelled** drilling unit,

* **GK** – for drilling unit without **its own** propulsion.

3.2.1.2 If the drilling unit essential machinery (engines, machines, boilers) have been built under PRS survey, the following symbol is inserted in the *Machinery Certificate*:

***PRM**

3.2.2 Main Symbol of Class of a Drilling Unit not Built under PRS Survey

3.2.2.1 If a drilling unit has been built under the survey of the other recognized Classification Society and then the unit has been assigned PRS class, the following main symbol of class is given:

GKM – for **self-propelled** drilling unit,

GK – for drilling unit without **its own** propulsion.

3.2.2.2 If the drilling unit essential machinery (engines, machines, boilers) have been built under the survey of the other recognized Classification Society and then the drilling unit has been assigned PRS class, the following symbol is inserted in the *Machinery Certificate*:

PRM

3.2.2.3 If a drilling unit has not been built under the survey of the other recognized Classification Society and has later been assigned PRS class, the following main symbol of class is given:

(GKM) – for self-propelled drilling unit,

(GK) – for drilling unit without its own propulsion.

3.2.2.4 If the drilling unit essential machinery (main engines, machines, boilers) have not been built under the survey of the recognized Classification Society and then the drilling unit has been assigned PRS class, the following symbol is inserted in the *Machinery Certificate*:

(PRM)

3.2.3 Drilling Unit Type Marks

.1 Self-elevating drilling unit is assigned the mark:

E

affixed to the symbol of class.

.2 Column-stabilized drilling unit is assigned the mark:

C

affixed to the symbol of class.

.3 Surface unit is assigned the mark:

S

affixed to the symbol of class.

3.2.4 Ice Strengthening Marks

3.2.4.1 Ice strengthenings of drilling units designed for drilling operations in areas where ice strengthening is necessary are subject to separate consideration by PRS in each particular case. If PRS is satisfied that the drilling unit is reinforced as necessary for operation in the specified ice condition, the unit will be assigned the mark:

L

affixed to the symbol of class.

3.2.5 Subdivision Mark

If a drilling unit complies with subdivision requirements, it will be assigned the mark:

[1]

The subdivision mark means that after the flooding of any one compartment the unit will remain afloat in a satisfactory state of equilibrium.

3.2.6 Mark of an Unattended Machinery Space

If automatic systems and machinery of a drilling unit comply with the requirements of *Part IV of the Rules*, such drilling unit will be assigned the mark:

AUT

affixed to the symbol of class.

The mark is applicable only in the case of machinery spaces being capable of an unattended operation during at least 8 consecutive hours. Inclusion of the mark in the symbol of class means that the scope of automation of machinery affords the possibility of its operation without direct attendance of the crew. Where a machinery space is capable of longer than 8 hours unattended operation, **the number of operating hours** is indicated in the *Certificate of Class (Temporary Certificate of Class)*.

3.2.7 Positioning Equipment Marks

If automatic systems and machinery of a unit comply with the relevant requirements **for maintaining position** contained in *Part IV of the Rules*, such unit **will** be assigned one of the following marks affixed **after** the symbol of class:

SP

when the unit is fitted with static positioning system

or the mark:

DP

when the unit is fitted with dynamic positioning system.

3.2.8 Mark of Limited Period of Class Validity

If, as a result of survey, the necessity to shorten the classification cycle has been stated, the appropriate mark of class validity period is placed in the symbol of class:

< 3 – when the classification cycle is shortened to 3 years,

< 2 – when the classification cycle is shortened to 2 years,

< 1 – when the classification cycle is shortened to 1 year.

3.2.9 Additional Descriptive Information

Other drilling unit's class related requirements, conditions or restrictions, not denoted by additional marks in the symbol of class, are entered in *Certificate of Class (Temporary Certificate of Class)*.

4 ASSIGNMENT OF CLASS

4.1 General

4.1.1 The condition for assigning class to a drilling unit is the Owner's written request for PRS class assignment, submission of the required technical documentation and satisfactory result of the initial survey for Assignment of Class.

4.1.2 PRS may assign class to:

- .1 new drilling unit, built under PRS survey,
- .2 existing drilling unit with valid class assigned by other recognized Classification Society,
- .3 existing drilling unit whose class, assigned by other recognized Classification Society, has become invalid,
- .4 existing drilling unit which has not been classed before by other recognized Classification Society,

4.1.3 In the cases, referred to in 4.1.2.1 and 4.1.2.4 prior to the commencement of survey activities the appropriate classification documentation shall be submitted to the PRS Head Office for approval, see 4.2 and 4.4.

4.1.4 Classification documentation, submitted to PRS, shall contain drawings and calculations taking into account loads relevant to the given type of a drilling unit.

4.1.5 After completion of the initial survey for Assignment of Class (as well as after Class Renewal Survey), PRS Branch Office issues the *Temporary Certificate of Class* to enable the drilling unit to be put into service. The results of the initial survey are subject to the PRS Head Office verification.

4.1.6 Assignment of class is confirmed by the issue of the *Certificate of Class* and an appropriate entry made in the PRS Register.

4.2 Classification Documentation and Workshop Documentation of Unit Built under PRS Survey

Prior to the commencement of a drilling unit **construction**, classification documentation, specified in 4.2.1 to 4.2.6 shall be submitted to the PRS Head Office for consideration and approval.

4.2.1 General Documentation

The documentation shall include:

- .1 technical description of a drilling unit,
- .2 general arrangement plan showing the unit shape,
- .3 environmental parameters determining:
 - sea bed characteristics,
 - wave heights and periods,
 - wind speed,
 - current speed,
 - minimum air and water temperature,
 - the unit's draught,
 - other environmental factors,
 - permissible water depth,
 - permissible sea bed penetration,
 - minimum distance of the hull from the water surface,
 - maximum unit loads during transit and operating conditions.

4.2.2 Hull and Structural Plans and Design Data

The submitted drawings shall clearly indicate the scantlings, **types and grades of materials, joint details and welding, or other methods of connection**. These **plans** shall include the following, where applicable:

- .1 **general arrangement,**
- .2 **inboard and outboard profile,**
- .3 **summary of distributions of fixed and variable weights,**
- .4 plan indicating design loadings for all decks,
- .5 **transverse** sections with scantlings,
- .6 **longitudinal** sections with scantlings,
- .7 decks, including helicopter deck,
- .8 framing,
- .9 shell plating,
- .10 watertight bulkheads and **flats,**
- .11 structural bulkheads and **flats,**
- .12 tank boundaries, **with location of vents and overflows,**
- .13 pillars and girders,

- .14 diagonals and struts,
- .15 legs,
- .16 **structure** in way of jacking or other elevating arrangements,
- .17 stability columns and intermediate columns,
- .18 hulls, pontoons, footings, pads or mats,
- .19 superstructures and deck houses,
- .20 arrangement and details of watertight doors and hatches showing the height of coamings and closing appliances,
- .21 **anchor handling arrangements,**
- .22 welding details and procedures,
- .23 **lines or offsets,**
- .24 **curves of form or equivalent data,**
- .25 **cross curves of stability or equivalent data,**
- .26 **wind heeling moment curves or equivalent data,**
- .27 capacity plan,
- .28 **tank sounding tables,**
- .29 **corrosion control arrangements,**
- .30 methods and locations for non-destructive **testing.**

In addition to the above, an arrangement plan of watertight compartmentation should be submitted as early in the design stage as possible, for review of damage stability. This drawing is to indicate the watertight bulkheads, decks and flats and all openings therein. Doors, hatches, ventilators, etc., and their means of closure, are to be indicated. Piping and ventilation systems should be shown in sufficient detail to evaluate their effects on the watertight integrity of the unit after incurring damage. (IACS UR D1/3.1)

In addition to the above drawings, the following data and calculations shall be submitted:

- .31 structural analysis for the relevant loading conditions,
- .32 resultant forces and moments from wind, waves, current, mooring and other environmental loadings taken into account in the structural analysis,
- .33 effects of icing on structural loading, stability and windage area,
- .34 **stability calculations, both intact and damaged, over the appropriate range of drafts, including the transit conditions,**
- .35 significant operational loads from drilling derrick and associated equipment, **such as riser tensioners,** on supporting structures, and other similar significant loadings,
- .36 calculations substantiating adequacy of structure to transit forces between legs and hull through the jacking or other elevating system,
- .37 evaluation of the drilling unit's ability to resist overturning while bearing on the sea bed.

The results from the relevant model tests or dynamic response calculations may be submitted as alternatives or as substantiation for the required calculations. The submitted calculations shall be suitably referenced. (IACS UR D1/3.3)

4.2.3 Hull Equipment **Documentation**

- .1 arrangement of closing appliances of openings (for information);
- .2 plans of steering gear, anchoring (for temporary and emergency mooring), mooring and towing arrangements, together with steering gear and rudder stock drawings;
- .3 calculations for steering gear, anchoring (for temporary and emergency mooring), mooring and towing arrangements (for information);
- .4 corrosion **control** arrangements;
- .5 trials programme **of the hull equipment.**

4.2.4 Stability Documentation

- .1 body lines, hydrostatic curves and static moments curves;
- .2 cross-curves of stability;
- .3 capacity plan and position of the centres of mass of spaces and tanks;
- .4 tables of free surfaces corrections;
- .5 flooding angle curve;
- .6 stability booklet.

4.2.5 Subdivision Documentation

- .1 calculations of the unit buoyancy after the flooding of one compartment;
- .2 calculations of damage stability after the flooding of one compartment;
- .3 arrangements for equalizing the unit after damage, together with the necessary calculations;
- .4 subdivision booklet, including plan of watertight compartments, location of openings and types of their means of closure, and location of equalizing arrangements.

4.2.6 Documentation of Machinery and Electrical Installations and Fire Protection

Plans shall showing the arrangements and details of all propulsion and auxiliary machinery, steering gear, boilers and pressure vessels, electrical systems, jacking systems, bilge and ballast systems, fire extinguishing systems, and other pumps and piping systems. A description of the jacking system is to be submitted. The scope of the documentation are given in *Part IV, Part V and Part VI* of the Rules. (IACS UR D1/3.2)

4.2.7 Workshop Documentation of a Drilling Unit under Construction

In addition to the approved classification documentation, workshop documentation shall be submitted to the relevant PRS Branch Office for agreement.

PRS Branch Office agrees the scope of workshop documentation with the shipyard for each building separately. The requirements of the relevant *Rules for the Classification and Construction of Sea-going Ships*, may be applied, as found applicable.

4.3 Certificates and Classification Documentation of Unit with Class of Other Recognized Classification Society

Where request is made for classification of a drilling unit which has class or previously has been classed by other recognized Classification Society, the following certificates and classification documentation shall be submitted:

- .1 last *Certificate of Class*,
- .2 all reports on inspections carried out by classification society surveyors during the last Class Renewal Survey and subsequent surveys,
- .3 documents relating to anchors and anchor chains for temporary or emergency mooring (see 2.1.6);
- .4 technical description of a drilling unit,
- .5 general arrangement plan,
- .6 midship section,
- .7 longitudinal section,
- .8 shell expansion or equivalent drawings for particular parts of the unit,
- .9 watertight bulkheads and decks,
- .10 steering gears and rudder stocks (for units with mechanical propulsion),
- .11 stability booklet,

- .12 subdivision calculations (where compliance with subdivision requirements is required),
- .13 fire divisions (if provided),
- .14 general arrangement plan of machinery spaces and boiler rooms, as well as emergency sets compartments,
- .15 propeller shafts and stern tubes (for units with mechanical propulsion),
- .16 diagrams of the basic pipe systems,
- .17 steam boilers and other pressure vessels,
- .18 principle diagrams of electric networks,
- .19 principle diagrams of main and emergency switchboards,
- .20 unit division into hazardous **zones** and a list of electrical equipment installed in such spaces, indicating explosion-proof equipment,
- .21 drilling unit operating manuals,
- .22 copies of the latest statutory documents issued by the Administration or an institution authorized by the Administration.

4.4 Certificates and Classification Documentation of Unit which has Not Been Classed Before

Where request is made for classification of a drilling unit which has not been classed before, the documentation within the scope specified in 4.3 (except that listed in sub-paragraphs 1 and 2) shall be submitted to PRS. Where deemed necessary, additional documentation may be required by PRS.

4.5 Operational Documentation

4.5.1 Operating Booklet

Each drilling unit shall be provided with **operating booklet or equivalent, containing** information for personnel on the safe **operation** of the unit in **all operational conditions, as well as in** emergency conditions. The operating booklet shall be on the unit **before PRS issues Temporary Certificate of Class**. The booklet **are subject to agreement** with PRS and shall **include**:

- .1 general description of the drilling unit, indicating the lightweight data based on the results of an inclining **experiment**, as well as hydrostatic curves or equivalent data;
- .2 pertinent data for each approved mode of operation, including design loads from waves and current, wind, minimum anticipated **atmospheric** and sea temperatures, assumed sea bed conditions, draught and other environmental factors;
- .3 general arrangement plan, indicating permissible deck loadings and showing watertight compartments, closures and vents. **If permanent ballast is to be used** – the ballast weight, **location** and material used shall be clearly indicated;
- .4 drilling unit stability booklet containing maximum KG-draught or displacement curve based upon compliance with the required intact and damage stability criteria;
- .5 drilling unit subdivision information;
- .6 **capacity plan showing capacities of tanks, centres of gravity, free surface corrections, etc.**
- .7 instructions for operation, including precautions to be taken in adverse weather, changing mode of operations or any inherent limitations of operations, **etc.**;
- .8 **plans** and description of ballast system, together with instructions for ballasting;
- .9 tank sounding tables;
- .10 hazardous areas plan;
- .11 fire control plan approved by the Maritime Administration Authorities **of flag State**;
- .12 representative examples of loading conditions for each approved mode of operation, together with means for evaluation of other loading conditions;

- .13 details of emergency shut down procedures for electrical equipment;
- .14 diagram of main fuel system, including fuel storage tanks;
- .15 information relating to safety means, including the arrangement of life-saving appliances and personnel evacuation proceedings;
- .16 drilling derrick operation rated parameters;
- .17 **identification** of the helicopter used for the design of the helideck. (IACS UR D1/1.7)

4.5.2 Construction Booklet

The booklet are subject to agreement with PRS and shall include:

- .1 set of drawings showing the exact location and extent of application of different grades and strength of structural materials;
- .2 description of **technological processes** for welding **various** materials **used in** construction and any other relevant information regarding **construction technology**;
- .3 data relating to restrictions and prohibitions regarding repairs or modifications. (IACS UR D1/1.8)

4.6 Initial Survey

4.6.1 The detailed scope of the initial survey of a drilling unit under construction is specified each time by attending PRS Branch Office on the basis of the *Rules*, approved documentation and the local building conditions.

4.6.2 The scope of the initial survey of an existing drilling unit is determined by the PRS Head Office according to **applicable** requirements presented in *Publication 97/P*.

4.6.3 **Operational Documentation** (see 4.5) shall be agreed within the scope of the Initial Survey.

5 MAINTENANCE OF CLASS – INTERVALS BETWEEN SURVEYS AND SURVEY SCOPE

5.1 General

5.1.1 The conditions for maintaining the drilling unit's class are:

- maintaining drilling unit's structure, installations and equipment – in a satisfactory technical condition,
- operation of the drilling unit in accordance with conditions specified in the *Certificate of Class*, the manufacturer's instructions and the principles of good seamanship,
- carrying out due periodical surveys at scheduled dates,
- complying, at scheduled dates, with the retroactive requirements, set forth in particular Parts of the *Rules*,
- fulfilling conditions of class at scheduled dates,
- carrying out the required occasional surveys,
- timely payment of fees for survey services.

5.1.2 All drilling units classed with PRS are subject, within each classification cycle, to the following periodical surveys:

- Annual Survey,
- Class Renewal Survey,
- periodical surveys of appliances subject to their own survey cycle (e.g. steam boilers).

5.1.3 All drilling units classed with PRS are subject to occasional surveys, in cases specified in **sub-chapter 5.8**.



5.1.4 Periodical surveys of drilling units may be performed by PRS on continuous survey basis or other alternative survey systems, described in sub-chapter 5.10.

5.1.5 PRS informs the Owner on the dates of due periodical surveys by the unit's survey status. Non-receipt of the unit's survey status does not absolve the Owner from an obligation to submit the unit for survey at the dates specified in the *Rules*.

5.1.6 Class Renewal Survey shall ascertain that the drilling unit's technical condition complies with the requirements of the *Rules* and that the unit is fit for the intended purpose for the subsequent 5-year period – subject to proper maintenance and operation.

5.1.7 The **Annual** Survey, through examination and operation test of particular machinery, arrangements and installations, shall ascertain that the drilling unit meets, in a satisfactory degree, class maintenance conditions.

5.1.8 The **Annual** or Class Renewal Survey may be considered complete if an appropriate survey of drilling unit has been held within the scope specified in sub-chapters 5.2 and 5.3. PRS may extend the scope of surveys, depending on the drilling unit's age, technical condition, as well as the type of equipment and structure.

5.1.9 After completion of periodical survey, PRS Branch Office endorses the *Certificate of Class* or issues *Temporary Certificate of Class* to enable the drilling unit operation. The results of periodical survey are subject to verification by the PRS Head Office.

5.1.10 Intervals between periodical surveys of a drilling unit built under PRS survey will date from the commencement of classification cycle.

5.1.11 Intervals between periodicals surveys of drilling units which have entered PRS class with a valid class of other recognized classification society, drilling units that have not been classed before by other recognized classification society and drilling units with class withdrawn are set by PRS.

5.1.12 PRS may shorten the intervals between examinations, measurements or tests of drilling unit's particular machinery, arrangements, systems and equipment if it is found necessary due to their technical condition or service conditions. In this case, new due dates of examinations, measurements or test shall be, in general, concurrent with periodical surveys.

5.1.13 In justified cases, PRS Surveyor may dispense with a survey of particular items of machinery in dismantled condition or limit the scope of survey if external examinations, measurements and operation tests prove that the machinery item is in a good and efficient condition.

5.2 Class Renewal Survey

5.2.1 Schedule

5.2.1.1 Class Renewal Surveys of hull, structure, equipment, and machinery are to be carried out at 5 year intervals to renew the *Certificate of Class*. (IACS UR Z15/2.1.1)

5.2.1.2 The first Class Renewal Survey is to be completed within 5 years from the date of the initial classification survey and thereafter within 5 years from the credited date of the previous Class Renewal Survey. Extensions of class beyond the 5th year may be granted in exceptional circumstances, specified in 1.2.19 (IACS PR 1C). In this case the next period of class will start from

the expiry date of the Class Renewal Survey before the extension was granted. (IACS UR Z15/2.1.2)

5.2.1.3 For survey completed within 3 months before the expiry date of the Class Renewal Survey, the next period of class will start from the expiry date of the Class Renewal Survey. For Survey completed more than three months before the expiry date of the Class Renewal Survey, the period of class will start from the survey completion date. (IACS UR Z15/2.1.3)

5.2.1.4 The Class Renewal Survey may be commenced at the 4th Annual Survey and be progressed with a view to completion by the 5th anniversary date. When the Class Renewal Survey is commenced prior to the 4th Annual Survey, the entire survey is to be completed within 15 months if such work is to be credited to the Class Renewal Survey. (IACS UR Z15/2.1.4)

5.2.1.5 A survey planning meeting is to be held prior to the commencement of the survey. (IACS UR Z15/2.1.5)

5.2.1.6 When considered necessary by PRS the interval between Class Renewal Surveys may be reduced. (IACS UR Z15/2.1.6)

5.2.1.7 Class Renewal Survey requirements of units of unusual design, in lay-up or in unusual circumstances will be determined on individual basis. (IACS UR Z15/2.1.7)

5.2.1.8 At the request of the Owner, and upon PRS approval of the proposed arrangements, a system of continuous survey may be undertaken whereby the Class Renewal Survey requirements are carried out in regular rotation in accordance with the PRS Rules to complete all the requirements of the particular Class Renewal Survey within a five year period. Any defects that may affect classification found during the survey, are to be reported to PRS and dealt with to the satisfaction of the Surveyor. (IACS UR Z15/2.1.8)

5.2.2 Scope

5.2.2.1 The Class Renewal Surveys shall include, in addition to Annual Survey requirements per section 5.3, the following examinations, tests, and checks of sufficient extent to verify that the hull, structure, equipment, and machinery are in satisfactory condition and that the mobile offshore drilling unit is in compliance with the applicable *Rule* requirements for the new period of class of 5 years to be assigned subject to proper maintenance and operation and the periodical surveys carried out at the due dates. (IACS UR Z15/2.2.1)

5.2.2.2 The examinations of the hull are to be supplemented by thickness measurements and testing as required, to verify the structural integrity. The aim of the examination is to discover excessive diminution, substantial corrosion, significant deformation, fractures, damages or other structural deterioration, that may be present. (IACS UR Z15/2.2.2)

5.2.2.3 The Class Renewal Survey is to include examination of underwater parts per Section 5.4. (IACS UR Z15/2.2.3)

5.2.3 Class Renewal Survey No. 1 – Hull, Structure and Equipment

5.2.3.1 All Units

The following parts are to be examined:

- The hull or platform structure including tanks, watertight bulkheads and deck, cofferdams, void spaces, sponsons, chain lockers, duct keels, helicopter deck and its supporting structure, machinery spaces, peak spaces, steering gear spaces, and all other internal spaces are to be

- examined externally and internally for damage, fractures, or excessive diminution. Thickness gauging of plating and framing may be required where wastage is evident or suspected.
- All tanks, compartments and free-flooding spaces throughout the drilling unit are to be examined externally and internally for excess wastage or damage.
 - Internal examinations of spud cans and mats may be specially considered.
 - Watertight integrity of tanks, bulkheads, hull, decks and other compartments is to be verified by visual inspection.
 - Suspect areas and critical structural areas should be examined and may be required to be tested for tightness, non-destructive tested or thickness gauged.
 - All special and primary application structures (as defined in IACS REC 11) and identified critical structural areas are to be subjected to close up survey.
 - Tanks and other normally closed compartments are to be ventilated, gas freed and cleaned as necessary to expose damages and allow meaningful examination and thickness gauged in case of excessive diminution.
 - Internal examination and testing of void spaces, compartments filled with foam or corrosion inhibitors, and tanks used only for lube oil, light fuel oil, diesel oil, fresh water, drinking water or other non-corrosive products may be waived provided that upon a general examination the Surveyor considers their condition to be satisfactory. External thickness gauging may be required to confirm corrosion control.
 - Structures such as derrick substructure and supporting structure, jack-houses, deck houses, superstructures, helicopter landing areas, raw water (sea water intake) towers and their respective attachments to the deck or hull.
 - Windlass and attachments of anchor racks and anchor cable fairleads.
 - Foundations and supporting headers, brackets, and stiffeners for drilling related apparatus, where attached to hull, deck, superstructure or deck house.
 - Thickness gaugings are to be carried out where wastage is evident or suspect.
 - Where provided, the condition of corrosion prevention system of ballast tanks is to be examined. Where a hard protective coating is found in POOR condition and it is not renewed, where soft or semi-hard coating has been applied, or where a hard protective coating was not applied from time of construction, the tanks in question are to be examined at a frequency determined by PRS. Thickness measurements are to be carried out as deemed necessary by the Surveyor.
 - Thickness measurements are to be carried out in accordance with Appendix B, tables 1, 2 or 3 as applicable. The Surveyor may extend the thickness measurements as deemed necessary. When thickness measurements indicate substantial corrosion, the extent of thickness measurements is to be increased to determine areas of substantial corrosion. Table 4 of Appendix B may be used as guidance for these additional thickness measurements. These extended thickness measurements are to be carried out before the survey is credited as completed. (IACS UR Z15/2.3.1)

Watertight Cable Transits*

Watertight cable transit seal systems should be inspected in accordance with item 8.6, Table 1 of IACS UR Z23, taking into account the following;

- The requirements for Class Renewal Survey may be undertaken by the attending PRS Surveyor or by a firm approved as a service supplier, according to *Publication 51/P* (IACS UR Z17).
- All transits are to be examined to confirm their satisfactory condition and the *Cable Transit Seal Systems Register (Register)* is to be reviewed to confirm it is being maintained. The Class Renewal Survey is to be recorded in the Register, in which a single record entry will be sufficient to record the survey of all transits.

- From review of the *Register*, where there are records entered since the last Class Renewal Survey of any disruption to the cable transits or installation of new cable transits (except which are reviewed and examined at previous Annual Surveys), the satisfactory condition of those transits is to be confirmed by the attending PRS Surveyor by review of records and examination of the transits; the results are to be recorded in the Register against each of those cable transits.
- In case the cable transits have been examined by an approved service supplier, the attending PRS Surveyor is to review the *Register* in order to ascertain that it has been properly maintained by the owner and correctly endorsed by the service supplier. (IACS UR Z28/4.1)

* Applicable to the MODU contracted for construction on or after 1st July 2021.

5.2.3.2 Surface-type Units

In addition to the requirements of 5.2.3.1 the following items are to be examined:

- Structural appendages and ducts for positioning units. (IACS UR Z15/2.3.2)

5.2.3.3 Self-Elevating Units

In addition to the requirements of 5.2.3.1 the following items are to be examined:

- all legs, including chords, diagonal and horizontal braces, gussets, racks, joints, together with leg guides. Tubular or similar type legs are to be examined externally and internally, together with internal stiffeners and pinholes as applicable;
- structure in, around and under jack-house and leg wells. Non-destructive testing of these areas may be required;
- leg jacking or other elevating systems externally;
- leg connections to bottom mats or spud cans, including non-destructive testing of leg connections to mats or spud cans;
- jetting piping systems or other external piping, particularly where penetrating mats or spud cans;
- spud cans or mats. Where the spud cans or mat are partly or entirely obscured below the mud line where the Class Renewal Survey is otherwise being completed, consideration may be given to postponement of the examinations until the next rig move. (IACS UR Z15/2.3.3)

5.2.3.4 Column-Stabilized Units

In addition to the requirements of 5.2.3.1 the following items are to be examined:

- connections of columns and diagonals to upper hull, structure or platform and lower hull, structure or pontoons;
- joints of supporting structure including diagonals, braces and horizontals, together with gussets and brackets;
- internal continuation or back-up structure for the above. Non-destructive examination may be required of these areas. (IACS UR Z15/2.3.4)

5.2.4 Class Renewal Survey No. 2 and Subsequent Class Renewal Surveys – Hull, Structure and Equipment

These surveys are to be at least as comprehensive as Class Renewal Survey No. 1, with special attention being given to the condition and thickness of material in high corrosion areas. Representative gaugings will be required as per Appendix B.

Special attention should be paid to splash zones on structure, legs or related structure, and in ballast tanks, pre-load tanks, free-flooding spaces, spud cans and mats. (IACS UR Z15/2.4)

5.2.5 Class Renewal Surveys – Machinery

5.2.5.1 Non-Self-Propelled Units

In addition to the requirements for Annual Surveys, at each Class Renewal Survey, special attention is to be given to the following items as applicable:

- all openings to the sea, including sanitary and other overboard discharges, together with cocks and valves connected therewith are to be examined internally and externally while the Unit is in drydock, or at the time of underwater examination in lieu of drydocking, and the fastenings to the shell plating are to be renewed when considered necessary by the Surveyor;
- pumps and pumping arrangements, including valves, cocks, pipes and strainers are to be examined. Non-metallic flexible expansion pieces in the main salt water circulating system are to be examined internally and externally. The Surveyor is to be satisfied with the operation of the bilge and ballast systems. Other systems are to be tested as considered necessary;
- the foundations of machinery are to be examined;
- heat exchangers and other unfired pressure vessels within the scope of classification are to be examined, opened up or thickness gauged and pressure tested as considered necessary, and associated relief valves proved operable. Evaporators that operate with a vacuum on the shell need not be opened, but may be accepted on basis of satisfactory external examination and operational test or review of operating records. (IACS UR Z15/2.5.1)

5.2.5.2 Self-Propelled Units

In addition to the requirements for non-propelled units, the main and auxiliary propulsion machinery, including associated pressure vessels should be surveyed. In addition, examination of the steering machinery is to be carried out, including an operational test and checking or relief-valve settings. The machinery may be required to be opened for further examination as considered necessary by the Surveyor. (IACS UR Z15/2.5.2)

5.2.5.3 Units with Propulsion – Assist or Dynamic Position

Propulsion-assist and dynamic positioning equipment should be surveyed on the basis of Class Renewal Survey – Machinery, in accordance with the requirements of the *Publication 120/P*. (IACS UR Z15/2.5.3)

5.2.6 Class Renewal Surveys – Electrical Equipment

In addition to the requirements for Annual Surveys, at each Class Renewal Survey, special attention is to be given to the following items as applicable:

- fittings and connections on main switchboards and distribution panels are to be examined, and care is to be taken to see that no circuits are overfused;
- cables are to be examined as far as practicable without undue disturbance of fixtures;
- all generators are to be run under load, either separately or in parallel. Switches and circuit breakers are to be tested;
- all equipment and circuits are to be inspected for possible development of physical changes or deterioration. The insulation resistance of the circuits is to be measured between conductors and between conductors and ground and these values compared with those previously measured;
- electrical auxiliaries installed for vital purposes, generators and motors are to be examined and their prime movers opened for inspection. The insulation resistance of each generator and motor is to be measured;

- the windings of main propulsion generators and motors are to be thoroughly examined and found or made dry and clean. Particular attention is to be paid to the ends of all windings of stators and rotors;
- emergency power systems are to be examined and tested. (IACS UR Z15/2.6)

5.2.7 Class Renewal Surveys – Shipboard Automatic and Remote Control Systems

In addition to the requirements of Annual Surveys the following items are to be examined:

- control actuators: All mechanical, hydraulic, and pneumatic control actuators and their power systems are to be examined and tested as considered necessary;
- electrical equipment: The insulation resistance of the windings of electrical control motors or actuators is to be measured, with all circuits of different voltages above ground being tested separately to the Surveyor's satisfaction;
- unattended Plants: Control systems for unattended machinery spaces are to be subjected to dock trials at reduced power on the propulsion engine to verify the proper performance of all automatic functions, alarms, and safety systems. (IACS UR Z15/2.7)

5.2.8 Class Renewal Surveys – Special Features (units of all types)

Mobile Offshore Drilling Units may have many items of machinery and electrical equipment not found on conventional vessels. Certain of these items are required for classification even if the unit is without propulsion machinery. Items to be especially examined and reported upon at all Class Renewal Surveys are as follows:

5.2.8.1 Hazardous Areas

Enclosed hazardous areas such as those containing open active mud tanks, shale shakers, degassers and desanders are to be examined and doors and closures in boundary bulkheads verified as effective. Electric lighting, electrical fixtures, and instrumentation are to be examined, proven satisfactory and verified as explosion-proof or intrinsically safe.

Ventilating systems including ductwork, fans, intake and exhaust locations for enclosed restricted areas are to be examined, tested and proven satisfactory.

Ventilating air alarm systems to be proven satisfactory.

Electrical motors are to be examined including closed-loop ventilating systems for large D-C motors.

Automatic power disconnect to motors in case of loss of ventilating air is to be proved satisfactory. (IACS UR Z15/2.8.1)

5.2.8.2 Remote Shutdown Arrangements

Remote shutdown for fuel-oil transfer service pumps and ventilating equipment, together with oil tank outlet valves where required to be capable of being remotely closed are to be proved satisfactory.

Emergency switch(s) for all electrical equipment including main and emergency generators, except alarm and communication systems and lighting in vital areas such as escape routes and landing platforms, are to be proved satisfactory. (IACS UR Z15/2.8.2)

5.2.8.3 Fire Fighting Systems where included in PRS Rules

A general examination of the fire detection and extinguishing systems is to be made to confirm their efficiency. The following items are to be especially examined:

- fire hoses, nozzles, and spanners at each fire station,
- servicing of all portable extinguishers,
- weighing and re-charging as necessary of all dry chemical and CO₂ extinguishers,
- fire pumps and piping including operation and capacity,
- alarm systems including fire and gas detection. (IACS UR Z15/2.8.3).

The scope of the survey of fire-fighting systems should be consistent with the applicable guidelines given in *Publication 29/1*.

5.2.8.4 Self-Elevating Systems

On self-elevating type Mobile Offshore Drilling Units, the elevating systems are to be examined and reported on. Pinions and gears of the climbing pinion gear train of rack and pinion systems are to be examined, as far as practicable, to the Surveyor's satisfaction by an effective crack detection method. (IACS UR Z15/2.8.4)

5.2.8.5 Piping Systems

Piping systems used solely for drilling operations and complying either with the PRS requirements or a recognized standard are to be examined, as far as practical, operationally or hydrostatically tested to working pressure, to the satisfaction of the Surveyor. (IACS UR Z15/2.8.5)

5.2.8.6 Bilge alarm systems

Bilge alarm systems, if fitted, are to be tested. (IACS UR Z15/2.8.6)

5.3 Annual Survey

5.3.1 Schedule

Annual Survey shall be held within 3 months before or after each anniversary date from the date of the initial classification survey or the completion for the last Class Renewal Survey. (IACS UR Z15/3.1)

5.3.2 Scope

The survey consists of an examination for the purpose of verifying, as far as practicable, that the hull, structure, equipment, and machinery are maintained in accordance with the applicable *Rule* requirements. (IACS UR Z15/3.2)

5.3.3 Annual Survey – Hull, Structure and Equipment

5.3.3.1 At each Annual Survey the exposed parts of the hull, deck, deck house, structures attached to the deck, derrick substructure, including supporting structure, accessible internal spaces, and the applicable parts listed below are to be generally examined and placed in satisfactory condition as found necessary. (IACS UR Z15/3.3.1)

5.3.3.2 The Surveyors are to be satisfied at each Annual Survey that no material alterations have been made to the unit, its structural arrangements, subdivision, superstructure, fittings, and closing appliances upon which the stability calculations or the load line assignment is based. (IACS UR Z15/3.3.2)

5.3.3.3 Suspect Areas identified at previous surveys are to be examined. Thickness measurements are to be taken of the areas of substantial corrosion and the extent of thickness measurements is to be increased to determine areas of substantial corrosion. Appendix B, Table

4 may be used as guidance for these additional thickness measurements. These extended thickness measurements are to be carried out before the annual survey is credited as completed. (IACS UR Z15/3.3.3)

5.3.3.4 All Units

The following items are to be examined:

- accessible hatchways, manholes and other openings;
- machinery casings and covers, companionways, and deck houses protecting openings;
- portlights together with deadcovers, cargo ports and similar openings in hull sides, ends, or in enclosed superstructures;
- ventilators, tank vent pipes together with flame screens, and overboard discharges from enclosed spaces;
- watertight bulkheads and end bulkheads of enclosed superstructures;
- closing appliances for all the above, including hatchcovers, doors, together with their respective securing devices, dogs, sill, coamings and supports;
- freeing ports together with bars, shutters and hinges;
- windlass and attachment of anchor racks and anchor cables;
- protection of the crew, guard rails, lifelines, gangways, and deck houses accommodating crew. (IACS UR Z15/3.3.4)

Watertight Cable Transits*

- checking if the *Cable Transit Seal Systems Register (the Register)* is being maintained,
- examination of the transits, as far as practicable, to confirm their satisfactory condition.
- review of the *Register* records and if necessary, examination of those transits which were, according to the *Register*, added or repaired since last annual survey, the results of this examination is to be recorded in *Register*. (IACS UR Z28/4.2)

* Applicable to the MODU contracted for construction on or after 1st July 2021.

5.3.3.5 Surface-Type Units

In addition to the requirements of 5.3.3.4 the following items are to be examined:

- the hull and deck structure around the drilling well (*moon-pool*) and in vicinity of any other structural changes in section, slots, steps, or openings in the deck or hull, and
- the back-up structure in way of structural members or sponsons connecting to the hull. (IACS UR Z15/3.3.5)

5.3.3.6 Self-Elevating Units

In addition to the requirements of 5.3.3.4 the following items are to be examined:

- jack-house structures and attachments to upper hull or platform;
- jacking or other elevating systems and leg guides, externally;
- legs as accessible above the waterline;
- plating and supporting structure in way of leg wells. (IACS UR Z15/3.3.6)

5.3.3.7 Column-Stabilized Units

In addition to the requirements of 5.3.3.4 the following items are to be examined:

- columns, diagonal and horizontal braces together with any other parts of the upper hull supporting structure as accessible above the waterline. (IACS UR Z15/3.3.7)

Note:

At the 1st Annual Survey after construction, Column Stabilized and Self Elevating Units may be subject to examination of major structural components including non-destructive testing, as deemed necessary by PRS. If PRS deems such survey to be necessary, the extent should be agreed to by PRS and the Owner or operator prior to commencement of the survey.

5.3.4 Annual Survey – Machinery**5.3.4.1 Self-Propelled Units**

A general examination of main and auxiliary engines, boilers, steering machinery, pumps, pipings, electrical installation including those in hazardous areas, and fire extinguishing systems is to be carried out. (IACS UR Z15/3.4.1)

5.3.4.2 Non-Self Propelled Units

A general examination of items required for classification such as auxiliary machinery, pumps, piping, electrical installation in hazardous areas and fire extinguishing systems is to be carried out. (IACS UR Z15/3.4.2)

5.3.4.3 Units with Propulsion-Assist or Dynamic Positioning

Propulsion-assist and dynamic positioning equipment should be surveyed on the basis of Annual Survey-Machinery in accordance with the requirements contained in *Publication 120/P*. (IACS UR Z15/3.4.3)

5.3.5 Annual Survey - Electrical Equipment

A general examination of electrical machinery, the emergency sources of electrical power, the switchgear, and other electrical equipment, including operation of same is to be carried out. The operation of the emergency sources of power, including their automatic operation, is to be confirmed as far as practicable. (IACS UR Z15/3.3)

5.3.6 Annual Survey – Shipboard Automatic and Remote Control Systems

A general examination of the automatic and remote-control system is to be made to the Surveyor's satisfaction. The machinery-space fire-detection and bilge water-level alarms are to be tested to confirm satisfactory operation. (IACS UR Z15/3.6)

5.3.7 Annual Survey – Special Features

A general examination of hazardous areas, remote shutdown arrangements, fire fighting systems where included in PRS Rules, self-elevating systems, piping systems, and bilge systems is to be made. (IACS UR Z15/3.7)

5.3.8 Annual Survey – Fire-fighting Systems

The scope of the survey of fire-fighting systems should be consistent with the applicable guidelines given in *Publication 29/I*.

5.4 Survey of the Outside (Underwater) of Unit's Bottom and Related Items**5.4.1 Schedule**

5.4.1.1 There is to be a minimum of two examinations of the outside of the unit's bottom and related items during each five-year class renewal survey period. One such examination is to be carried out in conjunction with the Class Renewal Survey. In all cases the interval between any two such examinations is not to exceed 36 months. For units operating in salt water for less than six (6) months each year, the survey interval may be increased by PRS.

5.4.1.2 Consideration may be given at the discretion of PRS, to any special circumstances justifying an extension of the interval.

5.4.1.3 Proposals for alternative means of examining the unit's bottom and related items while afloat may be considered, provided they are in general agreement with Appendix A to this *Part I*. (IACS UR Z15/4.1)

5.4.2 Parts of the Unit to be Examined

5.4.2.1 Surface-type Units (ship or barge type units)

External surfaces of the hull, keel, stem, stern frame, rudder, nozzles, and sea strainers are to be selectively cleaned to the satisfaction of the attending Surveyor and examined together with appendages, the propeller, exposed parts of stern bearing assembly, rudder pintle and gudgeon securing arrangements, sea chest and strainers, and their fastenings.

Propeller shaft bearing, rudder bearing, and steering nozzle clearances are to be ascertained and recorded. (IACS UR Z15/4.2.1)

5.4.2.2 Self-Elevating Units

External surfaces of the upper hull or platform, spud cans, mat, underwater areas of legs, together with their connections as applicable, are to be selectively cleaned to the satisfaction of the attending Surveyor and examined.

At each drydocking survey or equivalent, after Class Renewal Survey No. 2, the Surveyor is to be satisfied with the condition of the internal structure of the mat or spud cans. Leg connections to mat and spud cans are to be examined at each drydock survey or equivalent.

Non-destructive testing may be required of areas considered to be critical by PRS or found to be suspect by the Surveyor. (IACS UR Z15/4.2.2)

5.4.2.3 Column-Stabilized Units

External surfaces of the upper hull or platform, footings, pontoons or lower hulls, underwater areas of columns, bracing and their connections, sea chests, and propulsion units as applicable, are to be selectively cleaned and examined to the satisfaction of the attending Surveyor. Non-destructive testing may be required of areas considered to be critical by PRS or found to be suspect by the Surveyor. (IACS UR Z15/4.2.3)

5.4.3 Ballast Spaces

In conjunction with drydocking surveys (or equivalent) after Class Renewal Survey No. 1 and between subsequent Class Renewal Surveys, the following ballast spaces (depending on unit type, as given below) are to be internally examined, thickness gauged, placed in satisfactory condition as found necessary, and reported upon. If such examination reveals no visible structural defects, the examination may be limited to a verification that the corrosion prevention arrangements remain effective. (IACS UR Z15/4.3)

5.4.3.1 All Units

Particular attention is to be given to corrosion prevention systems in ballast spaces, free-flooding areas and other locations subjected to sea water from both sides. (IACS UR Z15/4.3.1)

5.4.3.2 Surface Type Units

One peak tank and at least two other representative ballast tanks between the peak bulkheads used primarily for water ballast shall be subject to survey. (IACS UR Z15/4.3.2)

5.4.3.3 Self-elevating Units

Representative ballast tanks or free-flooding compartments in mat or spud cans, if accessible, and at least two representative hull pre-load tanks shall be subject to survey. (IACS UR Z15/4.3.3)

5.4.3.4 Column Stabilized Units

Representative ballast tanks in footings, lower hulls, or free-flooding compartments as accessible, and at least two ballast tanks in columns or upper hull, if applicable shall be subject to survey. (IACS UR Z15/4.3.4)

5.5 Propulsion System Surveys

5.5.1 Schedule

Refer to the schedule in *Publication 111/P* (IACS UR Z21) for propeller shaft surveys. (IACS UR Z15/5.1)

5.5.2 Propeller Shaft Surveys and Extension of Survey Intervals

Surveys are to be carried out in accordance with *Part I of the Rules for the Classification and Construction of Sea-going Ships*, except that in the case of Mobile Offshore Drilling unit, due to low running hours on propeller shaft, extended intervals between propeller shaft surveys may be considered based on:

- satisfactory diver's external examination of stern bearing and outboard seal area including wear down check as far as is possible;
- internal examination of the shaft area (inboard seals) in propulsion room(s);
- confirmation of satisfactory lubricating oil records (oil loss rate, contamination);
- shaft seal elements are examined/replaced in accordance with seal manufacturer's recommendations. (IACS UR Z15/5.2)

5.5.3 Other Propulsion Systems

Other propulsion systems shall be surveyed according to applicable requirements of *Part I of Rules for the Classification and Construction of Sea-going Ships*. (IACS UR Z15/5.3)

5.6 Boilers Surveys

5.6.1 Schedule

Boiler surveys are to be carried out at the dates specified in *Part I of the Rules for the Classification and Construction of Sea-going Ships*, subchapter 5.7 (acc. to UR Z18, par.2). (IACS UR Z15/6.1)

5.6.2 Scope

The scope of the boiler survey shall include activities as specified in *Part I of the Rules for the Classification and Construction of Sea-going Ships*, subchapter 5.7, and in particular as below.

5.6.2.1 At each boiler survey the boilers, superheaters, and economizers are to be examined internally (water-steam side) and externally (fire side). (IACS UR Z15/6.2.1)

5.6.2.2 Boiler mountings and safety valves are to be examined at each boiler survey and opened as considered necessary by the Surveyor. (IACS UR Z15/6.2.2)

5.6.2.3 The proper operation of the safety valves is to be confirmed at each survey. (IACS UR Z15/6.2.3)

5.6.2.4 When considered necessary by the Surveyor, the boilers and superheaters are to be subjected to hydrostatic pressure test. (IACS UR Z15/6.2.4)

5.7 Survey Preplanning and Record Keeping

5.7.1 A specific survey program for Class Renewal Surveys and special continuous surveys must be worked out in advance of the Class Renewal Survey by the Owner in cooperation with PRS. The survey program shall be in written format. (IACS UR Z15/7.1)

5.7.2 Plans and procedures for survey of the outside of the unit's bottom and related items are to be submitted for review by PRS in advance of the survey and made available on board. These should include drawings or forms for identifying the areas to be surveyed, the extent of hull cleaning, non-destructive testing locations (including NDT methods), nomenclature, and for the recording of any damage or deterioration found. Submitted data, after review by PRS, will be subject to revision if found to be necessary in light of PRS experience. (IACS UR Z15/7.2)

5.8 Occasional Surveys

5.8.1 Damage Survey

5.8.1.1 Owner/operator of the unit is obliged to report to PRS without delay any damage, defect or breakdown, which could invalidate the conditions for which a classification has been assigned so that it may be examined at the earliest opportunity by PRS Surveyor. All repairs found necessary by the Surveyor are to be carried out to his satisfaction. (IACS UR Z15/8.1)

5.8.2 Repairs

5.8.2.1 Where repairs to hull, legs, columns or other structures, machinery or equipment, which affect or may affect classification, are planned in advance to be carried out, a complete repair procedure including the extent of proposed repair and the need for Surveyors attendance is to be submitted to and agreed upon by PRS reasonably in advance. Failure to notify PRS, in advance of the repairs, may result in suspension of the unit's classification until such time as the repair is redone or evidence submitted to satisfy the Surveyor that the repair was properly carried out. This applies also to repairs during voyage or on site. (IACS UR Z15/8.2.1)

5.8.2.2 The above is not intended to include maintenance and overhaul to hull, other structures, machinery and equipment in accordance with recommended manufacturers procedures and established marine practice and which does not require PRS approval; however, any repair as a result of such maintenance and overhauls which affects or may affect classification is to be noted in the ships log and submitted to the Surveyor. (IACS UR Z15/8.2.2)

5.8.3 Lay-up and Reactivation Surveys

5.8.3.1 When PRS is notified by the Owner that a Unit has been laid-up, this status will be noted in the vessel's survey status and surveys falling due during lay-up may then be held in abeyance until the vessel reactivates, at which time they are to be brought up-to-date. (IACS UR Z15/8.3.1)

5.8.3.2 Units which have been laid up and are returning to active service, regardless of whether PRS has been previously informed that the vessel has been in lay-up, a reactivation survey is required. The requirements for the reactivation survey are to be specially considered in each case, having due regard being given to the status of surveys at the time of the commencement of lay-up, the length of the lay-up period and the conditions under which the vessel has been maintained during that period. (IACS UR Z15/8.3.2)

5.8.4 Alterations

No alterations which may affect classification are to be made to the hull or machinery of a classed unit unless plans of proposed alterations are submitted and approved by PRS before the work of alterations is commenced. Such work is to be carried out in accordance with approved plans and tested on completion as required by the Rules and to the satisfaction of the Surveyor. (IACS UR Z15/8.4)

5.8.5 Welding and Replacement of Materials

5.8.5.1 Welding of steels, including high strength structural steel, is to be to the satisfaction of PRS. (IACS UR Z15/8.5.1)

5.8.5.2 Welding or other fabrication performed on steels of special characteristics or repairs or renewals of such steel or in areas adjacent to such steel is to be accomplished with procedures approved by PRS considering the special materials involved. Substitution of steels differing from those originally installed is not to be made without approval by PRS. (IACS UR Z15/8.5.2)

5.8.5.3 PRS may reference IACS REC 11 – *Materials Selection Guideline for Mobile Offshore Drilling Units* when considering suitable replacement materials. (IACS UR Z15/8.5.3)

5.9 Preparation for Survey

5.9.1 Conditions for Survey

5.9.1.1 The Owner is to provide the necessary facilities for a safe execution of the survey. For confined space entry, the requirements of *Publication 123/P* (IACS PR37) should be followed. (IACS UR Z15/9.1.1)

5.9.1.2 Tanks and spaces are to be safe for access, i.e. gas freed, ventilated and illuminated. (IACS UR Z15/9.1.2)

5.9.1.3 In preparation for survey and thickness measurements and to allow for a thorough examination, all spaces are to be cleaned including removal from surfaces of all loose accumulated corrosion scale. Spaces are to be sufficiently clean and free from water, scale, dirt, oil residues etc. to reveal corrosion, deformation, fractures, damages, or other structural deterioration. However, those areas of structure whose renewal has already been decided by the Owner need only be cleaned and descaled to the extent necessary to determine the limits of the areas to be renewed. (IACS UR Z15/9.1.3)

5.9.1.4 Sufficient illumination is to be provided to reveal corrosion, deformation, fractures, damages or other structural deterioration. (IACS UR Z15/9.1.4)

5.9.1.5 Where soft or semi-hard coatings have been applied, safe access is to be provided for the survey-or to verify the effectiveness of the coating and to carry out an assessment of the conditions of internal structures which may include spot removal of the coating. When safe access cannot be provided, the soft or semi-hard coating is to be removed. (IACS UR Z15/9.1.5)

5.9.1.6 The Owner is obliged to properly prepare a drilling unit for each survey.

5.9.1.7 PRS Surveyor may refrain from performing a survey if he considers that the unit has not been properly prepared for the survey.

5.9.2 Access to Structures

5.9.2.1 For survey, means are to be provided to enable the Surveyor to examine the hull structure in a safe and practical way. (IACS UR Z15/9.2.1)

5.9.2.2 For survey in void compartments and water ballast tanks, one or more of the following means for access, acceptable to the Surveyor, is to be provided:

- permanent staging and passages through structures;
- temporary staging and passages through structures;
- lifts and movable platforms;
- boats or rafts;
- other equivalent means. (IACS UR Z15/9.2.2)

5.9.2.3 For surveys conducted by use of a remote inspection technique, one or more of the following means for access, acceptable to the Surveyor, is to be provided:

- unmanned robot arm
- Remote Operated Vehicles (ROV)
- Unmanned Aerial Vehicles/Drones
- other means acceptable to PRS. (IACS UR Z15/9.2.3)

5.9.3 Equipment for Survey

5.9.3.1 Thickness measurement is normally to be carried out by means of ultrasonic test equipment. The accuracy of the equipment is to be proven to the Surveyor as required. Thickness measurements are to be carried out by a firm approved by PRS in accordance with *Publication 51/P* (IACS UR Z17). (IACS UR Z15/9.3.1)

5.9.3.2 One or more of the following fracture detection procedures may be required if deemed necessary by the Surveyor:

- radiographic equipment;
- ultrasonic equipment;
- magnetic particle equipment;
- dye penetrant;
- other acceptable NDT Techniques. (IACS UR Z15/9.3.2)

5.9.3.3 Each measurement constituting the basis for the assessment of the structure, machinery or equipment technical condition shall be carried out with measuring devices calibrated to recognized national or international standards. Each measuring device shall have valid calibration certificate. PRS Surveyor may accept, without confirmation of calibration:

- simple measuring equipment (e.g. rulers, measuring tapes, weld gauges, micrometers, etc.), provided they are of standard commercial design, properly maintained and periodically verified by the user;
- equipment fitted on board drilling unit and used for checking pressure, temperature or rpm, etc., provided their readings are compared with other similar instruments.

5.9.4 Survey Offshore or at Anchorage

5.9.4.1 Survey offshore or at anchorage may be accepted provided the Surveyor is given the necessary assistance from the personnel onboard. (IACS UR Z15/9.4.1)

5.9.4.2 A communication system is to be arranged between the survey party in the tank or space and the responsible officer on deck. This system must also include the personnel in charge of ballast pump handling if boats or rafts are used. (IACS UR Z15/9.4.2)

5.9.4.3 When boats or rafts are used, appropriate life jackets are to be available for all participants. Boats or rafts are to have satisfactory residual buoyancy and stability even if one chamber is ruptured. A safety checklist is to be provided to Surveyor. (IACS UR Z15/9.4.3)

5.9.4.4 Surveys of tanks by means of boats or rafts* may only be undertaken at the sole discretion of the Surveyor, who is to take into account the safety arrangements provided, including weather forecasting and ship response in reasonable sea conditions. (IACS UR Z15/9.4.4)

* See IACS REC 39 – *Guidelines for use of Boats or Rafts for Close-up Surveys*.

5.10 Continuous Surveys and other Alternative Survey Systems

5.10.1 At the written request of the Owner, in lieu of direct survey, PRS may accept continuous survey or other alternative survey system for specified items of the unit's hull, machinery installations and automatic systems.

5.10.2 Continuous survey of the unit's hull, machinery installations and automatic systems, as well as surveys of the unit's hull in Consolidated Supervision System and the survey of machinery installations and automatic systems in Planned Maintenance Scheme shall be carried out at the time of Annual Survey.

5.10.3 Continuous survey of Hull (CHS), as well as Consolidated Supervision System of Hull (CSS) are carried out in accordance with the applicable requirements of *Publication 54/P*.

5.10.4 Continuous survey of Machinery (CMS), as well as Planned Maintenance Scheme (PMS) of machinery are carried out in accordance with the applicable requirements of *Publication 2/P*.

5.10.5 Renewal survey requirements of units of unusual design, in lay-up or in unusual circumstances will be determined on individual basis.

6 SUSPENSION OF CLASS

6.1 Automatic Suspension of Class

The unit's class is automatically suspended if:

- .1 validity of class has expired before completion of Class Renewal Survey.
In exceptional circumstances, in accordance with the principles specified in *Part I – Rules for the Classification and Construction of Sea-going Ships*, PRS may grant an extension of class not exceeding, however, 3 months;
- .2 conditions of class issued by PRS have not been fulfilled in the due time or class assignment conditions have not been complied with. In such case PRS may extend the validity of class until a new date assigned for recommendations execution or class assignment conditions compliance;

- .3 damage to structure, machinery, installations or equipment, covered by the requirements of PRS *Rules*, has been found;
- .4 changes have taken place that affect entries in the *Certificate of Class* (change of the Owner, Flag, port of registry);
- .5 design and service conditions or operation area, specified in classification documents, have been transgressed;
- .6 the unit has not been subjected to the periodical survey within 3 months of the due date of the survey.

6.2 Class Suspension for Overdue Supervisory Fees

If the Owner has not paid PRS for services connected with the drilling unit, the drilling unit's class will be suspended by PRS Head Office decision. The Owner will be notified one month in advance, in writing, of PRS intent to suspend the class.

6.3 Duration of Class Suspension

The drilling unit's class will be suspended from the date of class suspension until the date of class reinstatement. Class suspension period shall not last longer than 6 months. If class suspension period exceeds 6 months, the drilling unit class is subject for withdrawal.

At the Owner's request, PRS may agree to extend the period of class suspension of a drilling unit that is not in service in the event of awaiting PRS decision after detecting damage to the unit or in the case of survey commencement for class reinstatement.

6.4 Class Reinstatement

Reinstatement of class may take place once the reasons for its suspension have been effectively eliminated.

6.5 Notification to Owners and Flag States

Information on class suspension as well as on class reinstatement shall be communicated by PRS by separate letters to the Owner and the Flag State Administration.

7 WITHDRAWAL OF CLASS

The class of a drilling unit is withdrawn in the following cases:

- after alterations to hull, superstructures, machinery, equipment and installations affecting the unit's safety and covered by the requirements of the *Rules* have been introduced without prior agreement with PRS;
- after the drilling unit has been sunk (scuttled) or transmitted for scrapping,
- at the written request of the Owner,
- after prolonged class suspension, as described in 6.3,

At the Owner's request, the drilling unit the class of which has been withdrawn may be subjected to a survey for reinstatement of class. The scope of the survey will be specified by PRS in each particular case.

8 LAY-UP AND RECOMMISSIONING OF UNIT

8.1 At the Owner's request, a drilling unit may be laid-up, while maintaining its class. The request shall include:

- the planned drilling unit lay-up period and the unit lay-up location (quay, roadstead, etc.),
- a list of machinery (e.g. boilers, generating sets, bilge pumps, etc.) that will be kept in service during the unit's lay-up period,
- a list of the unit's crew during lay-up period.

8.2 A drilling unit is laid-up upon carrying out survey within the scope agreed with PRS in each particular case.

8.3 During the laid-out period, the unit is subject to laid-up confirmation surveys performed within 3 months, before and after each anniversary of the assignment of the laid-up status to the drilling unit.

8.4 For a laid-up drilling unit, other periodical surveys, specified in 5.1.2, are automatically postponed until the survey for the unit's recommissioning.

8.5 A drilling unit is recommissioned at the Owner's request, upon carrying out a survey within the scope specified by PRS in each particular case.

The survey shall cover at least all due and overdue periodical surveys and conditions of class.

Depending on the length of the laid-up period, dock trials of particular installations or their parts or sea trials may be required.

APPENDIX A

Underwater Inspection in Lieu of Drydocking Survey

Note:

Appendix A would be applicable to all drilling unit types due to contents of paragraph 2.3 – Plans and Data.

1 General

Following are the procedures and conditions under which a properly conducted underwater inspection may be credited as equivalent to a drydocking survey.

2 Conditions

2.1 Limitations

Underwater Inspection in lieu of drydocking survey may not be acceptable where there is record of abnormal deterioration or damage to the underwater structure; or where damage affecting the fitness of the unit is found during the course of the survey.

2.2 Thickness Gauging and Non-Destructive Testing

Underwater or internal thickness gaugings of suspect areas may be required in conjunction with the underwater inspection. Means for underwater non-destructive testing may also be required for fracture detection.

2.3 Plans and Data

Plans and procedures for the drydocking survey (underwater inspection) are to be submitted for review in advance of the survey and made available on board. These should include drawings or forms for identifying the areas to be surveyed, the extent of underwater cleaning, non-destructive testing locations (including NDT methods), nomenclature, and for the recording of any damage or deterioration found

2.4 Underwater Conditions

The in-water visibility and the cleanliness of the hull below the waterline is to be clear enough to permit a meaningful examination which allows the Surveyor and diver and/or ROV pilot to determine the condition of the plating, appendages and the welding. PRS is to be satisfied with the methods of orientation of the divers/ROVs on the plating, which should make use where necessary of permanent markings on the plating at selected points. Overall or spot cleaning may be required.

3 Physical Features

The following physical features are to be incorporated into the unit's design in order to facilitate the underwater inspection. When verified they will be noted in the unit's classification for reference at subsequent surveys.

3.1 Stern Bearing

For self-propelled units, means are to be provided for ascertaining that the seal assembly on oil-lubricated bearings is intact and for verifying that the clearance or wear-down of the stern bearing is not excessive. For use of the wear-down gauges, up-to-date records of the base depths are to be maintained on board. Whenever the stainless-steel seal sleeve is renewed or machined, the base readings for the wear-down gauge are to be re-established and noted in the vessel's records and in the survey report.

3.2 Rudder Bearings

For self-propelled units with rudders, means and access are to be provided for determining the condition and clearance of the rudder bearings, and for verifying that all parts of the pintle and gudgeon assemblies are intact and secure. This may require bolted access plates and a measuring arrangement.

3.3 Sea Suctions

Means are to be provided to enable the diver to confirm that the sea suction openings are clear. Hinged sea suction grids would facilitate this operation.

3.4 Sea Valves

For the drydocking survey (underwater inspection) associated with the Class Renewal Survey, means must be provided to examine any sea valve.

4 Procedures

4.1 Exposed Areas

An examination of the outside of the structure above the waterline is to be carried out by PRS Surveyor. Means and access are to be provided to enable the Surveyor to accomplish visual inspection and non-destructive testing as necessary.

4.2 Underwater Areas

An examination of the entire unit below the waterline is to be carried out by an approved firm.

4.3 Damage Areas

Damage areas are to be photographed. Internal examination, measurements, marking and thickness gauging of such locations may be necessary as determined by the attending Surveyor. Means are to be provided for location, orienting and identifying underwater surfaces in photographs or on video tapes.

4.4 Alternatives

PRS is prepared to consider alternatives to the above guidelines including remotely operated vehicles, provided means and details for accomplishing results are not less effective.

APPENDIX B

Minimum Requirements for Thickness Measurements for Class Renewal Survey

TABLE 1
Minimum Requirements for Thickness Measurements for Surface-Type Units at Class Renewal Survey

| Class Renewal Survey No. 1 Age ≤ 5 | Class Renewal Survey No. 2 5 < Age ≤ 10 | Class Renewal Survey No. 3 10 < Age ≤ 15 | Class Renewal Survey No. 4 and subsequent 15 < Age |
|---|---|---|--|
| 1) Suspect areas throughout the unit. | 1) Suspect areas throughout the unit | 1) Suspect areas throughout the unit | 1) Suspect areas throughout the unit |
| | 2) One transverse section of deck plating abreast the moon pool opening within the amidships 0.6L, together with internals in way as deemed necessary. Where unit is configured with side ballast tanks, the plating and internals of the tanks are also to be gauged in way of the section chosen. | 2) Two transverse sections (girth belts) of deck, bottom and side plating abreast the moon pool and one hatch opening within the amidships 0.6L together with internals in way as deemed necessary. Where unit is configured with side ballast tanks, the plating and internals of the tanks to be gauged in way of the required belts, Remaining internals in ballast tanks to be gauged as deemed necessary | 2) A minimum of three transverse sections (girth belts) of deck, bottom, side, and longitudinal bulkhead plating in way of the moon pool and other areas within the amidships 0.6L, together with internals in way (including in perimeter ballast tanks, where fitted in way of belts). |
| | 3) Moon pool boundary bulkhead plating | 3) Moon pool boundary bulkhead plating | 3) Moon pool boundary bulkhead plating |
| | | 4) Internals in forepeak tank and aft peak tank as deemed necessary | 4) Internals in forepeak tank and aft peak tank as deemed necessary |
| | | | 5) Lowest strake of all transverse bulkheads in hold spaces. Remaining bulkhead plating to be gauged as deemed necessary |
| | | | 6) All plates in two wind and water strakes, port and starboard, full length. |
| | | | 7) All exposed main deck plating full length and all exposed first-tier super-structure deck plating (poop, bridge and forecastle decks). |
| | | | 8) All keel plates full length plus additional bottom plating as deemed necessary by the Surveyor, particularly in way of cofferdams and machinery spaces |

| Class Renewal Survey No. 1 Age ≤ 5 | Class Renewal Survey No. 2 5 < Age ≤ 10 | Class Renewal Survey No. 3 10 < Age ≤ 15 | Class Renewal Survey No. 4 and subsequent 15 < Age |
|--|---|--|--|
| | | | 9) Duct keel or pipe tunnel plating or pipe tunnel plating and internals as deemed necessary |
| | | | 10) Plating of sea chests. Shell plating in way of overboard discharges as considered necessary by the attending Surveyor. |

Notes:

1. Thickness measurement locations are to be selected to provide the best representative sampling of areas likely to be most exposed to corrosion, considering ballast history and arrangement and condition of protective coatings.
2. Thickness measurements of internals may be specially considered by the Surveyor if the hard protective coating is in GOOD condition.
3. For units less than 100 meters in length, the number of transverse sections required at Class Renewal Survey No. 3 may be reduced to one (1), and the number of transverse sections required at subsequent Class Renewal Surveys may be reduced to two (2).
4. For units more than 100 meters in length, at Class Renewal Survey No. 3, thickness measurements of exposed deck plating within amidship $0.5L$ may be required.

TABLE 2
Minimum Requirements for Thickness Measurements for Self-Elevating Units
at Class Renewal Survey

| Class Renewal Survey No. 1 Age ≤ 5 | Class Renewal Survey No. 2 5 < Age ≤ 10 | Class Renewal Survey No. 3 10 < Age ≤ 15 | Class Renewal Survey No. 4 and subsequent 15 < Age |
|--|---|--|---|
| 1) Suspect areas throughout the unit (particular attention should be paid to legs in way of splash zone) | 1) Suspect areas throughout the unit | 1) Suspect areas throughout the unit | 1) Suspect areas throughout the unit |
| | 2) Legs in way of Splash Zone. | 2) Legs in way of splash zone | 2) Legs in way of splash zone |
| | 3) Primary application structures where wastage is evident. | 3) Representative gaugings, throughout, of special and primary application structures. | 3) Comprehensive gaugings, throughout, of special and primary application structures. |
| | 4) Representative gaugings of upper hull deck and bottom plating and internals of one preload (ballast) tank. | 4) Leg well structure. | 4) Leg well structure. |
| | | 5) Representative gaugings of deck, bottom, and side shell plating of hull and mat. | 5) Representative gaugings of deck, bottom, and side shell plating of hull and mat |

| Class Renewal Survey No. 1 Age ≤ 5 | Class Renewal Survey No. 2 5 < Age ≤ 10 | Class Renewal Survey No. 3 10 < Age ≤ 15 | Class Renewal Survey No. 4 and subsequent 15 < Age |
|---------------------------------------|--|---|---|
| | | 6) Representative gaugings of upper hull deck and bottom plating and internals of at least two preload (ballast) tanks. | 6) Substructure of derrick as deemed necessary. |
| | | | 7) Representative gaugings of internals of all preload (ballast) tanks. |

Note:

Structural application designation (special, primary, secondary) are defined in IACS REC 11 – *Materials Selection Guideline for Mobile Offshore Drilling Units*.

TABLE 3
Minimum Requirements for Thickness Measurements for Column Stabilized Units at Class Renewal Survey

| Class Renewal Survey No. 1 Age ≤ 5 | Class Renewal Survey No. 2 5 < Age ≤ 10 | Class Renewal Survey No. 3 10 < Age ≤ 15 | Class Renewal Survey No. 4 and subsequent 15 < Age |
|---|--|--|--|
| 1) Suspect areas throughout the unit. | 1) Suspect areas throughout the unit. | 1) Suspect areas throughout the unit. | 1) Suspect areas throughout the unit. |
| 2) Columns and bracings where wastage is evident in Splash Zone | 2) Representative gaugings of columns and bracings in Splash Zone together with internals in way as deemed necessary | 2) Representative gaugings, throughout, of special and primary application structures. | 2) Comprehensive gaugings, throughout, of special and primary application structures. |
| | 3) Special and primary application structure where wastage is evident. | 3) One transverse section (girth belt) of each of 2 columns and 2 bracings in splash zone together with internals in way as deemed necessary | 3) One transverse section (girth belt) of each of one-half of the columns and bracings in splash zone and internals in way as deemed necessary (i.e., gauge half of the unit's columns and bracings in splash zone). |
| | | 4) Lower hulls in way of mooring lines where wastage is evident. | 4) Lower hulls in way of mooring lines where wastage is evident |
| | | 5) One transverse section (girth belt) of each lower hull between one set of columns | 5) One transverse section (girth belt) of each lower hull between one set of columns. |
| | | | 6) Representative gaugings of substructure of drilling derrick. |

Notes:

Structural application designation (special, primary, secondary) are defined in IACS REC 11 – *Materials Selection Guideline for Mobile Offshore Drilling Units*.

TABLE 4
Guidance for Additional Thickness Measurements in Way of Substantial Corrosion

| Structural member | Extent of measurement | Pattern of measurement |
|--------------------------|----------------------------------|---|
| Plating | Suspect area and adjacent plates | 5 point pattern over 1 square meter |
| Stiffeners | Suspect area | 3 measurements each in line across web and flange |

List of reference IACS resolutions related to this Part I

- REC 11/Rev.3 – Materials Selection Guideline for Mobile Offshore Drilling Units.
- REC 39/Rev.3 – Safe Use of Rafts or Boats for Survey
- REC 42/Rev.2 – Guidelines for Use of Remote Inspection Techniques for Surveys.
- PR 35/Rev.1 – Procedure for Imposing and Clearing Conditions of Class.
- UR Z17/Rev.18 – Procedural Requirements for Service Suppliers
- UR Z18/Rev.9 – Survey of Machinery.
- UR Z21/Rev.4 – Surveys of Propeller Shafts and Tube Shafts.
- UR Z23/Rev.7/Corr.2 – Hull Survey for New Construction.

List of IACS resolutions implemented in this Part I

- UR D1/Rev.4 – Requirement Concerning Offshore Drilling Units and other Similar Units.
- UR D2/Rev.2 – Definitions.
- UR Z15/Rev.3 – Hull, Structure, Equipment and Machinery Surveys of Mobile Offshore Drilling Units.
- UR Z28/Corr.1 – Surveys of Watertight Cable Transits – Cable Transit Seal Systems Register.

List of amendments effective as of 1 January 2024

| <i>Item</i> | <i>Title/Subject</i> | <i>Source</i> |
|------------------------------------|---|---|
| The entire text of the Publication | The text has been updated based on source documents | D1/Rev.4 D2/Rev.2 Z15/Rev.3 Z28/Corr.1 |