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"General Terms and Conditions" of the respective latest edition will be applicable
(see Rules for Classification and Construction, I - Ship Technology, Part 0 - Classification and Surveys).

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Section 1

Classification

A. General

1. Prerequisites for Classification

1.1 The Rules for Classification and Surveys apply to the Classification of mobile offshore units as well as fixed offshore installations as defined in B.1 and B.2.

1.2 The Rules published by GL give the requirements for the assignment and the maintenance of Class for the Classification of mobile offshore units as well as for fixed offshore installations.

1.3 Class assigned to a mobile offshore unit as well as to a fixed offshore installation, reflects the opinion of GL that the mobile offshore unit or fixed offshore installation, for declared conditions of use and within the relevant time frame, complies with the Rules applicable at the time the service is rendered.

1.4 The General Terms and Conditions as defined in the GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 1 at the time of signing of the contract with the Owner or prospective owner, the building yard or other subcontractors apply.

1.5 Classification essentially means the:

- review/approval of design documents, construction plans and material specifications in comparison with the applicable Rules according to Chapter 2 to 6 of these Rules or other applicable Rules and Guidelines of GL.

- supervision of new constructions or conversions

- supervision of mobile offshore units as well as of fixed offshore installations in service by surveys required by GL’s Rules in order to ascertain that a condition is maintained, which complies with Class requirements

2. Scope of Classification

2.1 New Constructions

2.1.1 Classification covers the mobile offshore unit’s or the fixed offshore installation’s hull/structure and machinery including electrical installations as well as special equipment and installations as far as agreed in the building specification between the prospective owner and the building yard. Classification aims primarily at ensuring reliability of the hull/structure and machinery systems on board, resulting in an adequate level of safety of personnel and environmental protection. However, Classification is not intended to ensure the effectiveness of the intended use on purpose.

2.1.2 Hull/structures, machinery and equipment determining the type of mobile offshore unit or fixed offshore installation are subject to examination within the scope of Classification, in accordance with the Character of Classification and affixed Class Notations.

Other systems and components may be included in the Classification and/or Certification procedure upon request of the prospective mobile offshore unit’s Owner or the fixed offshore installation’s Owner, the building yard or other subcontractors.

2.1.3 Upon completion of construction and trials, the Class Certificate(s) will be issued and will be kept on board, unless another location is agreed. The Certificates have a defined period of validity (Class Period), and may be renewed after prescribed thorough surveys, see Sections 3 and 5.

2.2 Existing mobile offshore units or fixed offshore installations

Consent may be given for existing mobile offshore units or fixed offshore installations, not built under GL’s supervision, to be classified and subjected to the corresponding inspection routine. In such a case, an initial investigation will be performed, normally comprising the review of existing design documents and service records, a thorough onsite survey of the mobile offshore unit, or fixed offshore installation, including investigation of the underwater hull/structure and foundations, verifications by measurement where necessary, and tests/trials of equipment and machinery as far as agreed and/or essential for safety, see also G.2.

B. Definitions

1. Mobile offshore unit

Mobile offshore unit, in the following abbreviated as “unit”, means any mobile offshore structure or vessel, whether designed for operation afloat or supported by the sea bed and intended for use in offshore operations and related activities.
Drilling unit means any unit intended for use in offshore drilling operations for the exploration or exploitation of the subsea resources.

Self-propelled unit means any unit which is designed for unassisted passage. All other units are considered as non-self-propelled.

For ship-shaped units the provisions of GL Rules I – Ship Technology, Part 0 – Classification and Surveys, as far as applicable, generally apply.

2. Fixed offshore installation

Fixed offshore installation or platform, in the following abbreviated as “installation”, means any offshore installation permanently fixed to the seabed and intended for diverse purposes.

3. Administration/Authorities

Administration or Authorities is the Government of the State whose flag the unit or installation is entitled to fly or the State under whose authority the unit or installation is operating in the specific case.

4. Types of units and installations

The offshore units or installations to which these Rules apply may be categorized according to the following criteria:

4.1 Method of connection to the sea bed

The following types of construction may be distinguished:

4.1.1 Floating units

– units connected to the sea bed by anchoring (mooring)
– units kept on position by dynamic positioning/propelling system
– units temporarily connected to the sea bed by legs in jacked up condition (self elevating units)

4.1.2 Fixed installations

– installations permanently fixed by piling (pile foundation)
– installations resting on the sea bed by action of gravity (gravity foundation)
– installations with excess of buoyancy, connected to a base by tensioned anchoring elements (tension leg foundation)

4.2 Materials used for construction of the hull/main structure

The following materials may be used for the hull/main structure:

– steel
– reinforced concrete
– any other suitable material
– combination of above materials

4.3 Use or employment

The following types of employment may be distinguished:

– drilling/exploration
– self-elevating drilling units
– column stabilized drilling units
– surface drilling units of ship or barge type
– other types of drilling units
– production, e.g. oil/gas
– processing/treatment
– storage or loading on/off
– research, measurements
– other types of employment

4.4 Manning

The following types of manning have to be distinguished:

– continuously manned installations or units
– temporarily or intermittently manned installations
– normally unmanned installations

Depending on the use and attendance arrangements, the provisions of the Rules may need to be subject to agreement.

4.5 Further terms

Further definitions of special terms are given in the relevant Chapters and Sections.

5. Modes of operation

5.1 General

A mode of operation is a condition or manner in which a unit or installation may operate or function while on location or in transit. Distinction is to be made between the different modes of operation in connection with safety factors and other safety-relevant criteria.

Insofar the requirements of these Rules are concerned the approved modes of operation for a unit or installation shall include the following.

5.2 Transitional conditions

– transportation from the construction site to the final operating location
– installation/assembly at the site of operation
– removal/recovery of the unit or installation
– all unit or installation movements from one geographical location to another
5.3 **Operating conditions**

Operating conditions are conditions where a unit is on location for purposes of drilling or other operations, and combined environmental and operational loadings are within the appropriate design limits established for such operations. The unit or installation may be either afloat or supported on the sea bed, as applicable. For environmental conditions see Chapter 4, Section 1.

5.4 **Severe storm conditions**

These are conditions during which a unit or installation may be subjected to the most severe environmental loading for which the unit or installation is designed. Drilling or other operations may have to be discontinued due to the severity of the environmental loading. The unit or installation may be either afloat or supported on the sea bed, as applicable.

C. **Limits of Classification**

The following shall apply unless otherwise specified:

1. **Date of contract**

The date of "contract for construction" of a unit or installation is the date on which the contract to build the unit or installation is signed between the prospective owner and the building yard. This date is normally to be declared to GL by the ordering client applying for the assignment of Class to new constructions.

Special consideration may be given for applying new or modified rule requirements which entered into force subsequent to the date of the contract, at the discretion of GL and in the following cases:

- when a justified written request is received from the party requesting for Classification
- when the keel is not yet laid and more than one year has elapsed since the contract was signed
- where it is intended to use existing previously approved plans for a new contract

Requests for activities by GL, such as request for Classification, surveys during construction, surveys of units or installations in service, tests, etc., are in principle to be submitted in writing and signed by the prospective owner and the building yard or the other subcontractors. Such request implies that the ordering party will abide by all the relevant requirements of the Rules and the General Terms and Conditions of GL.

2. **Sister units/installations**

The date of "contract for construction" of a series of sister units or installations 1, including specified optional units or installations for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the building yard.

Sister units or installations are such built to the same approved plans for Classification purposes. The optional units or installations will be considered part of the same series of sister units or installations if the option is exercised not later than one year after the contract to build the series was signed.

3. **If a contract for construction is later amended** to include additional units or installations or additional options, the date of "contract for construction" for such units or installations is the date on which the amendment to the contract is signed between the prospective owner and the building yard. The amendment to the contract is to be considered as a "new contract" to which 1. and 2. apply.

4. **The above procedures for application of the Rules are, in principle, also applicable to existing units as well as to installations in the event of major conversions or major alterations, to parts of the unit or installation.**

5. **The Rules, surveys performed, reports, Certificates and other documents issued by GL, are not intended to replace or alleviate the duties and responsibilities of parties such as Administrations, designers, building yards, manufacturers, repairers, suppliers, contractors or subcontractors, actual or prospective owners or operators, charterers, brokers, cargo-owners and underwriters. GL cannot assume therefore the obligations arising from these functions, even when GL is consulted to answer inquiries concerning matters not covered by its Rules, or other documents.**

6. **The activities of such parties which fall outside the scope of the Classification as set out in the Rules, such as design, engineering, manufacturing, operating alternatives, choice of type and power of machinery and equipment, number and qualification of crew or operating personnel, lines of the units or installations, as applicable, trim, hull/structure vibrations, spare parts, location and fastening arrangements, life-saving appliances, maintenance equipment and landing operations, remain therefore the responsibility of those parties, even if these matters may be given consideration for Classification according to the type of unit or the installation or Class Notation assigned.**

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1 "Sister Units or Installations" may have minor design alterations provided such alterations do not affect matters related to Classification.
7. The Classification-related services and documents performed and issued by GL do not relieve the parties concerned of their responsibilities or other contractual obligations expressed or implied or of any liability whatsoever, nor do they create any right or claim in relation to GL with regard to such responsibilities, obligations and liabilities. In particular, GL does not declare the acceptance or commissioning of a unit or installation or any part of it, this being the exclusive responsibility of the owner or other subcontractor.

8. Unless otherwise specified, the Rules do not deal with equipment such as pressure vessels, machinery and other equipment which is permanently installed and used solely for operational activities such as dredging, heavy load lifting or workshops, except for their effect on the Classification-related matters, such as the unit’s or the installation’s general strength.

9. During periods of construction, modification or repair, the unit or installation is solely under the responsibility of the builder or the repair yard. As an example, the builder or repair yard is to ensure that the construction, modification or repair activities are compatible with the design strength of the unit or installation and that no permanent deformations are sustained.

10. As regards to the Owner’s responsibility for maintenance and operation of the unit or installation in relation to the maintenance of Class, see Sections 3 and 5.

D. Application

1. General requirements

1.1 Scope
These Rules apply to all units and installations intended for use in offshore operations and related activities that are designed to be operated continuously or for a defined period at an offshore location.

1.2 Coming into force
Classification according to these Rules shall not apply to those units or installations contracted for construction prior to the effective date of coming into force of these Rules.

Classification according to these Rules may also be applied to existing units or installations, which have been built/erected before these Rules entered into force, when specially requested by an Owner and provided sufficient supporting documentation is submitted and it is subsequently surveyed to determine that they are of an equivalent standard.

1.3 Equivalence
GL reserve the right to consider designs for Classification which have similar configurations and modes of operation to those described in these Rules, if they are deemed to be equivalent and/or suited for the intended service, or alternatively, to impose more stringent requirements should these be deemed to be justified.

In addition, evaluation must be made of possible loading conditions peculiar to the type of units or installations under consideration. Calculations sustaining the adequacy of the design are to be submitted to GL. Machinery and electrical installations, etc. for other special purpose units or installations will be subject to approval by GL, as found to be applicable.

1.4 Confidentiality

1.4.1 No information, whatsoever related to the class of the unit, or the installation, will be provided or confirmed to any third party, unless the appropriate request for information is duly completed and signed by the party making the request and the authorisation of the current Owner is obtained.

1.4.2 GL maintains confidentiality with respect to all documents and other kinds of information received in connection with the orders entrusted to GL. GL shall comply with the security procedures, if any, agreed upon with the prospective Owner of the unit or the installation, and the building yard.

1.5 Interpretation
GL alone is qualified to decide upon the meaning, interpretation and application of the Rules and other Classification related documents. No reference to the Rules or other Classification-related documents has any value unless it involves, accompanies or follows the intervention of GL.

1.6 Disagreement and appeal

1.6.1 Any technical disagreement with the Surveyor in connection with the performance of his duties should be raised by the Owner, building yard or other subcontractor as soon as possible.

1.6.2 The Owner, building yard or other subcontractor may appeal in writing to GL, which will subsequently consider the matter and announce its decision according to its established procedure.

1.7 Duties of the interested parties

1.7.1 International and national regulations
The Classification of a unit or installation does not absolve the Owner, building yard or other subcontractor from compliance with any requirements issued by Administrations.

In the event of disputes, the text of the International and National Rules and Regulations will prevail.
When authorised by the Administration concerned, GL will act on its behalf within the limits of such authorisation. In this respect, GL will take into account the relevant requirements, will survey the unit or installation, and will report and issue, or contribute to the issue, of the corresponding Certificates.

The above surveys do not fall within the scope of the Classification of units or installations, even though their scope may overlap in part and may be carried out concurrently with surveys for assignment or maintenance of Class.

In the case of discrepancies between the provisions of the applicable International and National Regulations and those of the Rules, the former normally take precedence. However, GL reserve the right to call for the necessary adaptation to preserve the intention of the Rules or to apply the provisions of the scope of Classification.

1.7.2 Surveyor’s intervention

Surveyors are to be given free access at all times to units or installations which are classed or being classed, as well as to building yards and manufacturer works, to carry out their interventions within the scope of assignment or maintenance of Class, or within the scope of interventions carried out on behalf of Administrations, when so delegated.

Free access is also to be given to experts or/and auditors accompanying the Surveyors to GL within the scope of the audits as required in pursuance of GL’s internal Quality System or as required by external organizations.

Owners, building yards or other subcontractors are to take the necessary measures for the Surveyors’ inspections and testing to be carried out safely. Owners, building yards or other subcontractor, irrespective of the nature of the service provided by the Surveyors to GL or others acting on GL’s behalf, assume with respect to such Surveyors all the responsibility of an employer for his workforce such as to meet the provisions of applicable legislation. As a rule, the Surveyor is to be constantly accompanied during surveys by personnel of the Owner, building yard or other subcontractor.

The Certificate of Classification and/or other documents issued by GL remain the property of GL. All Certificates and documents necessary to the Surveyor’s interventions are to be made available by the Owner, building yard or other subcontractor, to the Surveyor on request.

During the phases of design and construction of the unit or installation, due consideration should be given to rule requirements in respect of all necessary arrangements for access to spaces and hull/structures with a view to carrying out Class surveys. Arrangements of a special nature are to be brought to the attention of GL.

2. Types of offshore constructions

2.1 Units and installations

These Rules as defined in E.1. and E.2. apply to units and to installations as defined in B.1. and B.2. The Rules apply to supporting structures made of steel, concrete or equivalent materials, to machinery, electrical installations, equipment, and essential systems with regard to safe operation.

2.2 Unclassified types

Types that are not included within the categories listed in B.4. may by special agreement be checked for general compliance with the principles expressed in these Rules.

2.3 Novel features

Units or installations which contain novel features of design, with respect to buoyancy, elevating arrangements, structural arrangements, machinery, equipment, etc. to which the requirements of these Rules are not directly applicable, may be classed, when approved by GL on basis that the Rules, insofar 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.

3. Subject of investigation

3.1 Constructional elements

The following items, where applicable, are covered by these Rules and are subject to approval by GL:

- materials
- corrosion protection
- structural strength
- loadbearing structures
- foundations
- welding
- buoyancy
- stability, intact and damaged
- weathertight/watertight integrity
- temporary or positional mooring equipment
- jacking system
- propulsion machinery including shafts and propellers
- steering gears and rudders
- auxiliary machinery,
- safety systems and equipment as far as their operation involves any hazards
- pumping and piping systems, including valves
- boilers and pressure vessels
- electrical installations
- protection against fire and explosion
GL reserve the right to extend the scope of Classification to all equipment and machinery used in the operation of the installation/unit, which by their character and/or arrangement may impair the safety of human life, of the unit or installation and its operation or of the environment.

Structural systems and equipment determining the type of unit or installation are subject to examination within the scope of Classification, if the type of unit or installation is specified in the form of a Notation affixed to the Character of Classification, compare Sections 2 and 4.

3.2 **Industrial equipment**

3.2.1 GL will usually survey working gear and plants for industrial purposes, e.g. drilling equipment, in respect of their influence on the safety of the unit or installation only. The Rules do not cover structural details of industrial equipment used exclusively in drilling or other industrial operations. Machinery, electrical and piping systems used exclusively for industrial purposes are not covered by these Rules, except in so far as their design or arrangement may affect the safety of the unit or installation.

3.2.2 The safety and quality of working gear and other special installations can also be ascertained separately by special agreement. Existing regulations for the prevention of accidents are to be observed, see C.5.

3.3 **Anchoring and positioning**

Determination of the adequacy of sea bed conditions, regarding bearing capacity, resistance to possible sliding and anchor holding capability, is not covered by these Rules.

The 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 operation is the responsibility of the Owner and is not included in these Rules. But if anchoring and positioning is decisive for the safety of the unit or installation, such as for pontoons equipped for pipe laying, this equipment is part of Classification or Certification.

3.4 **Ice strengthening**

Units or installations designed to be operated in areas where ice strengthening may be necessary will be specially considered. Provided that the reinforcement necessary for operation in the specified ice conditions is provided to the satisfaction of GL, an appropriate Notation will be granted. For fixed offshore installations Chapter 7 – Guidelines for the Construction of Fixed Offshore Installations in Ice Infested Waters should be considered.

3.5 **Special installations**

For special installations subject to buoyancy, such as buoys, tension leg platforms, etc., the requirements for floating units have to be adopted, as far applicable.

E. **Rules and Guidelines, Regulations**

1. **Underlying GL Rules**

The Classification of offshore units and installations as well as of any pertinent equipment is based on:

- the respective latest edition of these Rules for Classification, Certification and Surveys
- the construction Rules relating to the respective unit or installation type, as applicable on the date of conclusion of the contract between building yard (manufacturer) and Owners (client), Chapter 2 - 6

2. **Other GL Rules and Guidelines**

For particular elements, components or procedures not specifically covered by these Rules, and for ship-shaped units, other GL Rules and Guidelines may be applied where appropriate and agreed upon, e.g.:

- GL Rules I – Ship Technology, Part 0 – Classification and Surveys
- GL Rules II – Materials and Welding
- GL Rules IV – Industrial Services, Part 6 – Offshore Technology, Chapter 8 – Guidelines for the Construction and Classification/Certification of Floating Production, Storage and Off-loading Units
- GL Rules IV – Industrial Services, Part 6 – Offshore Technology, Chapter 7 – Guidelines for the Construction of Fixed Offshore Installations in Ice Infested Waters
- GL Rules IV – Industrial Services, Part 8 – Pipelines, Chapter 1 – Rules for Subsea Pipelines and Risers
- GL Rules VI – Additional Rules and Guidelines, Part 11 – Other Operations, Chapter 1 – Guidelines for Ocean Towage

Regarding special equipment see also Section 2, B.5. and Section 4, B.4.
3. **Other rules**

3.1 The review and appraisal of design and construction particulars by GL will be exclusively based on rules and guidelines, agreed upon in the specification of the Classification contract between the prospective Owner, the building yard or other subcontractors, and GL.

3.2 In addition, statutory construction rules for units or installations, such as API, etc., may be applied upon agreement with the relevant Authority and if defined in the specification of the Classification contract between the prospective Owner, the building yard or other subcontractor, and GL.

3.3 The compliance of the units or installations to statutory regulations of the respective Flag State is left to the responsibility of the prospective Owner, the building yard or any subcontractor.

3.4 International Conventions, Resolutions, Codes, etc., may be applicable in certain cases and/or for certain aspects, e.g. pollution prevention. Details shall be clarified and laid down in the Classification specification in the particular case.

4. **Industry Codes, Standards**

Internationally recognized Standards and Codes published by relevant organisations, national industry organisations or standardisation institutions may be used upon agreement in particular cases as a design and construction basis.

Examples for such standards are: ISO, IEC, EN, DIN, etc.

F. **Period and Validity of Class**

1. **Period of Class**

The hull/structure, the machinery as well as special equipment and installations classed have the same period of Class. The Class continues to be valid, provided that the hull/structure, the machinery as well as special equipment and installations are subjected to all surveys stipulated and that any repairs required are carried out to the satisfaction of GL, see also Sections 3 and 5.

2. The requirements for:
   - prerequisites for validity of Class
   - repairs, conversions
   - Class expiry

are defined in the GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 2, B. as far as applicable.

3. **Laid-up units or installations out of operation**

3.1 The period of Class of hull/structure and machinery will not be interrupted throughout the laying-up and out of operation period. This means that periodical and non-periodical surveys will have to be carried out as before; surveys due, which include dry-docking or in-water surveys may be postponed until re-commissioning.

3.2 Upon expiry of the Class, a survey substituting the Class Renewal Survey will have to be performed. An entry on the Class Renewal will be made in the Class Certificate, with the Notation LAID-UP UNIT/INSTALLATION OUT OF OPERATION, and indicated in the Register.

3.3 A unit or installation put out of commission may be subject to specific requirements for maintenance of Class, as specified in the following, provided that the Owner notifies GL of the situation.

3.4 If the Owner does not notify GL of the laying-up of the unit, or the out of operation of the installation, or does not implement the lay-up maintenance program, the Class will be suspended and/or withdrawn when the due surveys are not carried out by their limit dates in accordance with the applicable requirements given in 2.

3.5 The lay-up/out of operation maintenance program provides for a “laying-up /out of operation” survey to be performed at the beginning of lay-up and subsequent “lay-up/out of operation” condition surveys which are required to be carried out as long as the unit or installation remains laid-up/out of operation. The minimum content of the lay-up/out of operation maintenance program as well as the scope of these surveys is to be agreed with GL. The other periodical surveys, which become overdue during the lay-up/out of operation period, may be postponed until the re-commissioning of the unit or installation.

3.6 Where the unit or installation has an approved lay-up/out of operation maintenance program and its period of Class expires, the period of Class is extended until it is re-commissioned, subject to the satisfactory completion of the lay-up/out of operation condition surveys as described in 3.5.

3.7 The periodical surveys carried out during the lay-up/out of operation period may be credited, either wholly or in part, at the discretion of GL, having particular regard to their extent and dates. These surveys will be taken into account for the determination of the extent of surveys required for the re-commissioning of the unit or installation, and/or the expiry dates of the next periodical surveys of the same type.
3.8 When a unit or installation is re-commissioned, the Owner is to notify GL and make provisions for the unit or installation to be submitted to the following surveys:
- A survey prior to re-commissioning, the scope of which depends on the duration of the lay-up period. Depending on the duration of the lay-up period, a sea trial and/or re-commissioning trials of specific installations and/or components will be carried out.
- All periodical surveys which have been postponed in accordance with 3.1 taking into account the provisions of 3.7.

3.9 Where the previous period of Class expired before the re-commissioning and was extended as stated in 3.2, in addition to the provisions of 3.7 a complete Class renewal survey is to be carried out prior to re-commissioning. Items which have been surveyed in compliance with the Class renewal survey requirements during the 15 months preceding the re-commissioning may be credited. A new period of Class is assigned from the completion of the Class renewal survey.

4. Change of ownership

4.1 In the case of change of ownership, the unit, or installation, retains its current Class with GL provided that:
- GL is informed of the change in due time and able to carry out any survey as deemed appropriate, and
- the new Owner expressly requests to keep the current Class, involving acceptance of GL’s General Terms and Conditions and Rules. This request covers inter alia the condition of the unit, or installation, when changing ownership.

4.2 The Class is maintained without prejudice to those provisions in the Rules, which are to be enforced in cases likely to cause suspension or withdrawal of the Class, such as particular damages or repairs to the mobile offshore unit, or fixed offshore installation, of which GL has not been advised by the former or, as the case may be, new Owner.

5. Suspension and withdrawal of Class

5.1 Discontinuity of Class

5.1.1 The Class may be discontinued either temporarily or permanently. In the former case it is referred to as “suspension” of Class, in the latter case as “withdrawal” of Class. In both these cases, the Class is invalidated in all respects. If for some reason the Class has been expired or suspended or withdrawn by GL, this will be indicated in the Register.

5.1.2 If the Owner is not interested in maintenance of Class of the unit or installation or any of its special equipment and installations classed, or if conditions are to be expected under which it will be difficult to maintain Class, GL will be informed accordingly. GL will decide whether the Certificate will have to be returned and Class suspended or withdrawn. Where only special equipment and installations are concerned, the corresponding Notation will be withdrawn and the Certificate amended accordingly.

5.1.3 The Class may also be suspended if a unit or installation is withdrawn from active service for a long period.

5.2 Suspension of Class

5.2.1 The Class may be suspended either automatically or following the decision of GL. In any event, the unit or installation will be considered as not retaining its Class from the date of suspension until the date when Class is reinstated.

5.2.2 The Class may be automatically suspended when one or more of the following circumstances occur:
- when a unit or installation is not operated in compliance with the rule requirements, such as in cases of services or conditions not covered by the service Notation, or trade outside the navigation restrictions for which the Class was assigned
- when a unit proceeds with less freeboard than that assigned, or has the freeboard marks placed on the sides in a position higher than that assigned, or in cases of units where freeboards are not assigned the draught is greater than that assigned
- when the Owner fails to inform GL in order to submit the unit or installation to a survey after defects or damages affecting the Class have been detected
- when repairs, alterations or conversions affecting the Class are carried out either without requesting the attendance of GL or not to the satisfaction of the Surveyor.

5.2.3 Suspension of Class with respect to the above cases will remain in effect until such time as the cause giving rise to suspension has been removed. Moreover, GL may require any additional surveys deemed necessary, taking into account the condition of the Mobile Offshore Unit or Fixed Offshore Installation and the cause of the suspension.

5.2.4 In addition, the Class is automatically suspended:
- when the Class Renewal Survey has not been completed by its limit date or within the time granted for the completion of the survey, unless the unit or installation is under attendance by
GL’s Surveyors with a view to completion prior to resuming trading or operation

– when annual or intermediate survey has not been completed by the end of the corresponding survey time window

Suspension of Class with respect to the above cases will remain in effect until such time as the Class is reinstated once the due items and/or surveys have been dealt with.

5.2.5 In addition to the circumstances for which automatic suspension may apply, the Class of a unit or installation may also be suspended following the decision of GL:

– when a Condition of Class/recommendation is not dealt with within the time limit specified, unless it is postponed before the limit date by agreement with GL

– when one or more surveys are not held by their limit dates, or the dates stipulated by GL also taking into account any extensions granted in accordance with the requirements

– when due to reported defects, GL consider that a Mobile Offshore Unit or Fixed Offshore Installation, is not entitled to retain its Class as well on a temporary basis (pending necessary repairs or renewals, etc.)

– in other circumstances which GL will consider on their merits (e.g. in the event of non-payment of fees)

5.2.6 Suspension of Class decided by GL takes effect from the date when the conditions for suspension of Class are met and will remain in effect until such time as the Class is reinstated once the due items and/or surveys have been dealt with.

5.3 Withdrawal of Class

5.3.1 GL will withdraw the Class of a unit or installation in the following cases:

– at the request of the Owner

– when the causes that have given rise to a suspension currently in effect have not been removed within six months after due notification of suspension to the Owner

– when the unit or installation is reported as a constructive total loss

– when the unit or installation is lost

– when the unit or installation is reported scrapped

5.3.2 Withdrawal of Class takes effect from the date on which the circumstances causing such withdrawal occur.

5.3.3 When the withdrawal of Class of a unit or installation comes into effect, GL will:

– forward written notice to the Owner

– delete the Mobile Offshore Unit or Fixed Offshore Installation from the Register

– notify the flag Administration, if required

– make the information available to the Underwriters, on their request

5.4 Suspension/withdrawal of Class Notations

If the survey requirements related to maintenance of Class Notations are not complied with, the suspension or withdrawal may be limited to the Notations concerned.

5.5 Reassignment/re-admission to Class

5.5.1 At the request of the Owner, a unit or installation which was previously classed with GL, subsequently withdrawn from Class and has not been classed since that time, may have the Class reassigned subject to an Admission to Class survey. If applicable and appropriate, account may be taken of any periodical surveys held in the former period of Class with GL.

5.5.2 Where, after suspension or withdrawal of Class, the repairs required by GL have been carried out and the unit or installation has been subjected to a survey for Re-admission to Class, the original Class may be reassigned starting with a new period of Class.

5.5.3 Depending on the duration of the interruption period, parts of the machinery installation may have to be dismantled and sea trials or function tests have to be carried out in excess of the requirements mentioned above. For parts and installations replaced or added in the meantime, the scope of examinations and tests to be carried out for Admission to Class shall be as for new constructions.

G. Classification Procedures

1. Classification of new constructions

1.1 Order for Classification

1.1.1 The written order for Classification is to be submitted to GL (in triplicate) by the building yard or the Owner, using the form provided by GL. The order shall be submitted by the client, who as a basis of the building contract has the duty to observe the Rules of GL.
1.1.2 Where orders for the production of components are placed with subcontractors, GL should be advised and an indication of the scope of production provided. The client will be responsible for observance of the GL Rules by the subcontractors.

1.1.3 Where the order considers particulars to be used for the Classification which have already been approved by GL for previous new constructions, this shall be specifically stated in the order. Amendments to the Construction Rules having been introduced meanwhile shall be taken into account.

1.2 Design review/approval

1.2.1 Particulars of the design are to be submitted to GL for examination according to the details defined in Chapter 2, Section 1, C. and Chapter 3, Section 1, C. in due time prior to commencement of construction.

1.2.2 The particulars and drawings to be submitted, of components subject to approval, will be examined by GL. Where applicable, they will be provided with a mark of approval and returned in one copy.

1.2.3 Any deviations from approved drawings require to be approved by GL prior to being realized.

1.3 Supervision of construction and installation

GL will supervise the construction of units or installations and their installation at the site of operation, as defined in Chapter 2, Section 1, D. and Chapter 3, Section 1, D.

1.3.1 GL will assess the production facilities and procedures of the building yard, subcontractors and other manufacturers, to determine whether they meet the requirements of GL’s Rules and any additional requirements of the prospective Owner as agreed in the building specification. This assessment may be connected with a quality assurance Certification.

1.3.2 Materials, components, appliances and installations subject to inspection are to comply with the relevant rule requirements and are to be presented for inspection to GL’s Surveyors, unless otherwise provided as a result of special arrangements agreed upon with GL. It is the obligation of the Owner, building yard, manufacturers, and other subcontractors to inform the GL’s inspection office in due time about particular surveys to be carried out.

1.3.3 In order to enable the Surveyor to fulfil his duties, he is to be given free access to the workshops and to the unit or installation. For performance of the tests required, the building yard, subcontractors and other manufacturers are to give the Surveyor any assistance necessary by providing the staff and the equipment needed for such tests.

1.3.4 During the phase of construction of the unit or installation, GL will satisfy itself by surveys and inspections that:

- parts for hull/structure, machinery and electrical installations or special equipment subject to review/approval have been constructed in compliance with the approved drawing/documents
- all tests and trials stipulated by the Rules for Classification and Construction are performed satisfactorily
- workmanship is in compliance with current engineering Standards and/or GL’s Rule requirements
- welded parts are produced by qualified welders in accordance with qualified procedures having passed the tests required by the applicable Rules
- for hull/structure sections or components requiring GL’s approval Certificates have been presented. The building yard, subcontractors or other manufacturers will have to ensure that any parts and materials requiring approval will only be delivered and installed, if the appropriate Certificates have been issued.
- type-tested or type approved appliances and equipment are used, in accordance with the Rule requirements, where individual Certificates are not required.

1.4 Testing and commissioning

1.4.1 GL Surveyors will witness the necessary tests at the manufacturers, the yard and at sea, see also Chapter 2, Section 1, E. and Chapter 3, Section 1, E.

1.4.2 As far as practicable, the machinery including electrical installations as well as special equipment and installations classified will be subjected to operational tests at the manufacturer’s premises to the scope specified in the Construction Rules.

Where the machinery, electrical installation or special equipment and installations are of novel design or have not yet sufficiently proved their efficiency and reliability under actual service conditions on board, GL may require performance of tests under specified severe conditions.

1.4.3 Upon completion of the construction, prior to commissioning, all hull/structures, machinery including electrical installations as well as special equipment and installations classified will be subjected to operational trials in the presence of the Surveyor prior to and during the trials. This will include, e.g.:

- tightness, operational and load tests of tanks, anchoring equipment, hatches and hatch covers shell ports, ramps, etc.
- operational and/or load tests of the machinery, installations and equipment of importance for the operational safety of the unit or installation
During a final survey, checks will be made to ensure that any deficiencies found, i.e. during the trials, have been eliminated.

1.5 Reports, Certificates

1.5.1 Testing of materials, components, machinery, etc. at the subcontractor's works will be certified by the Surveyor and/or the local GL representation.

1.5.2 Upon completion of the unit or installation the Surveyors will prepare construction reports, on the basis of which GL will issue the Class Certificate, see 1.6.

1.5.3 The Classification data of each unit or installation will be included in GL’s data file. An extract of these data will be indicated in the Register.

1.5.4 Where GL has been entrusted in addition and beyond the scope of the Rules with supervision of construction in accordance with the building specification a Certificate of Conformity (CoC) will be issued and a corresponding Notation added to the Class designation, see Sections 2 and 4.

1.6 Class Certificate, Characters of Classification

1.6.1 Assignment of Class, issuance of the Class Certificate, and assignment of the corresponding Character of Classification and Notations thereto according to Sections 2 and 4 are conditional upon proof being furnished of compliance with the GL Construction Rules in force on the date of placing the order, see 1.1.

GL Class can be granted only, if the initial, or if necessary the repeated, tests and trials show satisfactory results.

1.6.2 GL reserve the right to add special remarks in the Class Certificates, as well as information regarding operation of the installation/unit which is of relevance for the unit’s or installation’s Class.

1.7 Register

The Classification data of each unit or installation classified will be included in the GL data file. An extract of these data will be entered in the Register.

During the period of Class GL will update these details on the basis of relevant reports submitted by the Surveyors.

2. Admission to Class

2.1 Orders

2.1.1 Orders for the Classification of units or installations or special equipment not constructed under the supervision of GL or for readmission to Class are to be formally addressed to GL’s Head Office, in triplicate using the form provided by GL. The order for Classification is to be accompanied at least by the particulars referred to in 2.2. GL reserve the right to request submission of additional particulars.

2.1.2 GL is to be informed about the previous Class status and period, as well as about any Conditions of Class (recommendations) imposed by the previous Classification Society.

2.2 Particulars for structure/hull and machinery

The particulars and/or drawings as defined in the design review for Installations in Chapter 3, Section 1, C. and for units in Chapter 2, Section 1, C. have to be submitted, as far as applicable:

2.3 Examination of design and surveys

2.3.1 The requirements according to 1.2 are applicable in principle. The report on the survey according to 1.5 will be evaluated together with the examination of the particulars and/or drawings to be approved, if needed.

2.3.2 Where sufficiently detailed documentation required for approval is not available, the necessary information may have to be gathered by an additional survey, possibly including measurements, and/or by additional investigations, computations, etc.

2.3.3 If the unit or installation, as well as the special equipment and installations classed have the valid Class of another recognized Classification Society, and if sufficient proof has been furnished regarding the present Class status, GL may dispense with parts of the examination of drawings and computations and may reduce the scope of the survey. However, at least a survey to the scope of an annual survey is to be carried out.

2.4 Reports, Certificates, documentation

2.4.1 Upon completion of the examinations and surveys mentioned above, a Class Certificate will be issued and a Class period defined.

2.4.2 Concerning the Surveyor's reports and Certificates, the provisions in 1.5 apply also to the Classification of existing units or installations.

2.4.3 Once units or installations and the relevant equipment have been classed with GL, the Rules in force for surveys as well as procedures applicable to units or installations, constructed under supervision of GL will apply.

2.4.4 The following documents to allow quick action in case of surveys, special operation and especially in case of damage must be kept on board and shall be made available to the Surveyor on request:
– Class Certificate, all Survey Statements and reports
– a Stability Handbook and Loading Manual, if required
– a description of corrosion protection system, if required

– "as built" drawings and other documentation containing particulars or instructions of significance as far as GL is concerned, e.g. use of special steel, etc.
– a list of important testing/monitoring procedures to be followed in connection with validity of Class
Section 2

Class Designation for Mobile Offshore Units

Table 2.1 Examples for Class designation

<table>
<thead>
<tr>
<th>Hull / Structure</th>
<th>100 A5</th>
<th>SELF ELEVATING UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machinery</td>
<td>MC</td>
<td>EC</td>
</tr>
</tbody>
</table>

B. Characters of Classification

1. Hull/structure

1.1 Character of Classification

100Ap The unit’s hull/structure fully complies with the requirements of the Construction Rules of GL or other rules considered being equivalent.

90Ap, 80Ap, 70Ap (as examples): The hull/structure does not fully comply with the requirements of the Construction Rules of GL; however, the Class may be maintained for a shorter period and/or with shorter survey intervals. The figures 100, 90, etc. indicate the maintenance condition of the structure/hull in relation to the requirements of the Construction Rules, taking into account the permissible corrosion and wear tolerances.

1.2 Class period

p The Character p shown in 1.1 indicates the duration of the nominal Class period in years. Normally: p = 5

The nominal Class period may be extended, if after survey of the unit and examination of the maintenance scheme of the unit, GL is convinced that compliance with the Rule requirements can be assured for this extended period, see also Section 3.

The nominal Class period can be reduced in exceptional cases and for a limited time, if the unit does not fully comply with the Rules but has been allowed to operate under restrictions, e.g. regarding the service range and/or weather conditions. A lower degree of compliance may be indicated, in exceptional cases, by a Character of Classification less than 100 A (e.g. 80A).
2. Machinery

**MC** The machinery and all installations covered by Classification comply with the requirements of the Construction Rules of GL or other rules considered equivalent.

**A-MC** The machinery of non-self-propelled units complies with the requirements of the Construction Rules of GL or other rules considered equivalent.

**MC, A-MC:** The machinery does not fully comply with the requirements of the Construction Rules of GL, but functional safety and seaworthiness are ensured for the envisaged service.

3. Survey, supervision of construction

The characters have the following meaning:

**♀** Hull/structure, machinery and/or special equipment have been constructed:
- under the supervision of GL at the building yard and/or at subcontractors supplying construction components and hull/structure sections and
- with Certification by GL of components and materials requiring inspection, subject to the GL Construction Rules

**♀♀** Hull/structure, machinery installation or special equipment have been constructed under the supervision of and in accordance with the rules of another recognized Classification Society and have subsequently been classed with GL.

**Note**

In the event Admission to Class (Change of Class) from a Society, which is not a member of IACS (International Association of Classification Societies), prior examination of drawings of the hull/structure, machinery and electrical installations is conditional.

4. Subdivision, damage stability

4.1 General markings

For the hull/structure proof of subdivision and damage stability has been furnished.

**♀♀** As for example, hull/structure, which has been constructed under supervision as stated in 3. and for which proof of subdivision and damage stability has been furnished, one of the two markings, shown on the left are assigned

4.2 Special markings

The proof of damage stability is specified by an additional 5-digit marking indicated in the Register, see Section 1, G.1.7.

The first two digits represent the unit type (letter) and the damage stability regulations to be applied (figure), see Table 2.2.

The letter following in the third place indicates whether the deterministic (D) or the probabilistic (P) stability assessment method has been applied.

The fourth and fifth digits, i.e. one digit each, specify the procedure applied, see Table 2.2, second part:

- for units assessed according to the deterministic method the figures define the subdivision status assumed in the damage stability calculation
- for units assessed according to the probabilistic method the figures state, in percent, the required subdivision index (survival probability)

| First and second digit | S2---: | S = Special Purpose Ships  
| | 2 = Code for Mobile Offshore Drilling Units (MODU)  |
| Third to fifth digit | --D11: | D = deterministic damage stability assessment  
| | 11 = 1-Comp.-Status, throughout entire units length |
5. Special equipment

5.1 Diving systems

TAZ The diving system complies with the requirements of the GL Rules I – Ship Technology, Part 5 – Underwater Technology, Chapter 1 – Diving Systems and Diving Simulators.

C. Notations affixed to the Character of Classification

1. General

1.1 There are different kinds of Notations, describing particular features, capabilities, service restrictions or special equipment and installations included in the Classification, as defined in the following.

1.2 The Notations to be affixed to the Character of Classification are optional and may be selected by the prospective Owner or building yard. The chosen scope of Notations has to be defined in the Classification specification as well as in the building specification.

1.3 Generally, the type and/or service Notations will be assigned according to the indications or suggestions of the prospective Owner or building yard.

1.4 The Notations define the type and/or service of the unit, which have been considered for its Classification, according to the request for Classification signed by the prospective Owner or building yard. The assignment of any Notation to a new construction is subject to compliance with the general rule requirements laid down in the Construction Rules.

1.5 The Notations applicable to existing units conform to the Rules of GL in force at the date of assignment of Class. However, at the request of the Owner and as far as applicable, the Notations of existing units may be updated according to the current GL Rules.

1.6 A Notation may be complemented by one or more Notations, giving further precision regarding the type and/or service of the unit, for some of which specific rule requirements are applied.

1.7 At the request of the Owner and as far as applicable, GL reserve the right to grant other Class Notations as defined in other GL Rules. The Class maintenance surveys for such Class Notations are to be performed to the corresponding requirements in the other GL Rules.

2. Hull/structure Notations

2.1 Range of service

Units complying with the Construction Rules’ requirements for a restricted range of service only will have the Notations specified below affixed to their Character of Classification.

M Restricted International Service

This range of service is limited, in general, to operate along the coast, provided that the distances to the nearest port of refuge as well as the offshore distance do not exceed 200 nautical miles. This applies to operate in the North Sea and within enclosed seas, such as the Mediterranean, the Black Sea and waters with similar seaway conditions. Trade to Iceland, Spitsbergen and the Azores is exempted.

K Coastal Service

This range of service is limited, in general, to operate along the coasts, provided that the distances to the nearest port of refuge as well as the offshore distance do not exceed 50 nautical miles. This applies also to operate within enclosed seas, such as the Baltic Sea and gulfs with similar seaway conditions.

Where a permissible distance of less than 50 nautical miles has been fixed for a unit, the relevant distance will be added in brackets behind the notation K in the Class Certificate, e. g. K(20).

W Shallow Water Service

This range of service is limited to operation in shoals, bays, haffs and firths or similar waters, where heavy seas do not occur.

The Notations may possibly be assigned on the basis of the seaway conditions prevailing in the respective service area (e. g. official seaway statistics).

Observance of the range of service boundaries is a prerequisite for validity of the Class.

GL may, on request, agree to the range of service being extended for a limited period and/or with certain reservations. This will have to be documented.

2.2 Ice strengthening

Hull/structure and machinery installations, which comply with the requirements of the Construction Rules relating to strengthening for navigation in ice, will have one of the "Ice Class" Notations specified in the following affixed to the Character of Classification. Except for Class Notation E, which on request may be assigned to the hull or the machinery installation only, hull and machinery must always be assigned the same ice class. If the hull is constructed such as to comply with a higher ice class, this will be indicated in the Technical File.
2.3 Unit type

The following Notations for various types of units may be distinguished, e.g.:

**SELF ELEVATING UNIT**

Notation for units equipped with legs which are capable of raising the hull above the sea surface by means of a jack-up system. These units have hulls with sufficient buoyancy and they are also known as jack-up units. The movable legs of a self elevating unit are supported on the sea bed when in the elevated condition and may be equipped with enlarged sections or footings to reduce the soil penetration, or may be attached to a bottom pad or mat.

**COLUMN STABILIZED UNIT**

Notation for units with an upper structure connected to the underwater hulls or footings by widely spaced columns. Column Stabilized Units depend upon the buoyancy of the columns, lower hulls or footings for flotation stability for all modes of operation afloat or in the raising or lowering the unit, as may be applicable.

**DRILLING VESSEL**

Notation for self-propelled ship type units equipped for drilling operations.

**WELL STIMULATION VESSEL OR UNIT**

Notation for self-propelled ship type vessels or units equipped for intervention at subsea wells with the aim to improve the operational well performance.

**PIPE-LAYING VESSEL**

Notation for self-propelled ship type units equipped for pipe-laying operations.

**PONTOON**

Notation for non self-propelled units with a closed deck and without cargo holds.

**FLOATING PRODUCTION AND OFFLOADING UNIT (FPSO)**

Notation for floating units intended for production, storage and off-loading of hydrocarbons.

**FLOATING STORAGE AND OFFLOADING UNIT (FSO)**

Notation for floating units intended for storage and off-loading of hydrocarbons.

2.4 Laid-up units

**LAID-UP UNIT**

Notation for units, where the unit is not in active operation and the Class Renewal Survey has been substituted, compare Section 1, F.3.

2.5 In-water survey

**IW**

Notation for units, the hull/structure is specially equipped for in-water surveys as per GL Rules I – Ship Technology, Part 1 – Seagoing Ships, Chapter 1 - Hull Structures, Section 34. See also Section 3, E.3.

2.6 Bridge design on seagoing units

**NAV**

Notation for units, the bridge is designed in compliance with GL Rules I – Ship Technology, Part 1 – Seagoing Ships, Chapter 11 – Bridge Design on Seagoing Ships, One-Man Console.

**NAV-O** Ocean Area

**NAV-OC** Ocean Areas and Coastal Waters

2.7 Dynamic Positioning Systems

**DP**

Notation for units complying with the GL Rules I – Ship Technology, Part 1 – Seagoing Ships, Chapter 15 – Dynamic Positioning Systems. Depending on the desired system reliability and on the basis of risk analysis three distinctive marks are to be provided, i.e.:

- **DP1** non-redundant
- **DP2** redundant
- **DP3** redundant, installation in separate compartments

2.8 Environmental protection standards

**ENVIRONMENTAL PASSPORT**

Notation for units fulfilling the requirements of the GL Rules VI – Additional Rules and Guidelines, Part 12 – Environmental Protection, Chapter 1 – Guidelines for the Environmental Service System (GL-ESS).
2.9 Special equipment and systems

Special systems, e.g. propulsion systems, or equipment covered by Classification may be referred to by a Notation affixed to the Character of Classification, such as:

**EC Equipment Certified**

This Notation is assigned for characteristic implements and/or equipment which have by agreement been constructed in accordance with the Rules and under supervision of GL.

This does not apply to the anchor equipment, which is always covered by the Classification.

**EQUIPPED WITH TURRET MOORING**

Notation for units equipped with a rotational mooring which enables the safe mooring of ships for all directions of wind and/or stream.

**EQUIPPED WITH POSITION MOORING SYSTEM**

Notation for units equipped with a system of a greater number of winches and anchors holding the unit exactly at a desired position and also moving the unit on a defined track.

**EQUIPPED FOR DRILLING**

Notation for units equipped with a drilling derrick and all the equipment to handle and operate the drill pipe and has all the necessary auxiliary devices.

**EQUIPPED FOR CONSTRUCTION**

Notation for units equipped with construction equipment to install and erect fixed offshore installations which may stand alone or in a bigger offshore complex.

**EQUIPPED FOR PIPE LAYING**

Notation for units equipped with equipment for storage, handling and welding of pieces of pipe into a continuous pipeline and with a system to safely place this pipeline onto the sea bed.

**EQUIPPED FOR PRODUCTION**

Notation for units equipped with facilities for production of oil and gas to be delivered by the fully developed source.

**EQUIPPED FOR PROCESSING**

Notation for units equipped with a plant for processing gas and/or oil into semi-finished products or end products.

**EQUIPPED FOR FLARING**

Notation for units equipped with at least one flare or cold vent, used for the safe disposal of hydrocarbon gases and vapours and other gases associated with drilling, production and processing of mineral oil and gas.

**EQUIPPED FOR STORAGE**

Notation for units equipped with storage facilities for large gas and/or oil quantities, which act as a buffer e.g. between loading periods of transport vessels.

**EQUIPPED FOR POWER TRANSFORMING**

Notation for units equipped with a power transformer which receives electric energy with high voltage and distributes this power with lower voltage to various consumers in an offshore complex or vice versa.

**EQUIPPED FOR LOADING**

Notation for units equipped to serve as loading terminals for gas or oil within larger offshore complexes.

**EQUIPPED FOR ACCOMMODATION**

Notation for units equipped with large accommodation facilities for a number of special personnel.

**EQUIPPED WITH BOW RUDDER**

Notation for units where a high level of manoeuvrability is required and which is achieved by a bow rudder.

2.10 Operating manual

**OPERATION ACCORDING TO OPERATING MANUAL**

Notation where the operation of the unit has to be carried out strictly according to the requirements defined in an Operating Manual readily available on board and containing guidance for the safe operation and envisaged emergency conditions, compare Chapter 2 – Mobile Offshore Units, Section 1, C.

2.11 Materials

If units are constructed of normal strength structural steel, this will not be specially indicated. If hull other materials are employed for the hull/structure, this will be indicated in the Ship Register and in the Class Certificate, e.g.:

**HIGHER STRENGTH HULL STRUCTURAL STEEL**

**REINFORCED CONCRETE**

**ALUMINIUM**

**FRP (Fibre Reinforced Plastic)**

Other materials used for structural parts of the hull/structure will be indicated in the Register.
2.12 Novel designs
EXP Hull/structure, machinery installations or essential parts have been constructed in accordance with a design, for which sufficient experience is not available yet. GL will decide at what intervals the required periodical surveys will have to be carried out. Where experience over a prolonged period of time has proved the efficiency of the design, the Notation EXP may be cancelled.

3. Machinery Notations

3.1 Automation
Machinery installations which comply with the Rules of GL for automated and/or remote-controlled systems will have the following Notations affixed to the Character of Classification. Other Notations for a detailed description are possible:

AUT The machinery installation is fitted with equipment for unattended machinery spaces, so that control and maintenance operations are not required for at least 24 hours.

AUT-nh The period during which control and maintenance operations are not required, is less than 24 hours, with nh indicating that the machinery space may be left unattended for n hours.

AUT-Z The machinery installation is operated with the engine control room permanently attended for centralized control and is equipped with a system for remote control of the main propulsion plant from the bridge or arrangements for manoeuvring from the engine control room.

3.2 Ice strengthening
E etc. Notation affixed to the Character of Classification for the machinery installation see 2.2.

3.3 Condition Monitoring
Where a Condition Monitoring System is used to reliably determine the condition of their components depending on the minimum achieved scope of condition monitoring, one of the following Notations will be assigned to the Character of Classification for the machinery installations, compare GL Rules I – Ship Technology, Part 1 – Seagoing Ships, Chapter 17 – Guidelines for Machinery Condition Monitoring.

CM1 Up to 3% of the possible Condition Monitoring scope is achieved.

CM2 Up to 10% of the possible Condition Monitoring scope is achieved.

CM3 Up to 20% of the possible Condition Monitoring scope is achieved.

CM4 More than 20% of the possible Condition Monitoring scope is achieved.

3.4 Novel designs
EXP See 2.12

4. Summary of notations for offshore units
Table 2.3 gives an overview for the various Notations which may be assigned to mobile offshore units. Additional information is given in the respective Chapters.
Table 2.3 Summary of notations for mobile offshore units

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Section 3

Survey of Mobile Offshore Units

A. General

1. Supervision and testing during construction

During the design and construction phase of a mobile offshore unit the following steps of the approval procedure to obtain GL Class shall be applied sequentially unless otherwise specified:

- design review/approval see Chapter 2, Section 1, C.
- survey of materials and components, see Chapter 2, Section 1, D.
- supervision of fabrication and installation, see Chapter 2, Section 1, D.
- testing and commissioning, Chapter 2, Section 1, E.

2. Surveys for maintenance of Class

2.1 General requirements

2.1.1 For maintenance of Class, the regular periodical and non-periodical surveys of hull, machinery including electrical installation and any special equipment classed as defined in the following are to be performed.

Units of ship-shaped structure will be generally inspected in accordance with the provisions of GL Rules I – Ship Technology, Part 0 – Classification and Surveys, and are to be observed as far as applicable.

The periodical surveys include:

- the annual survey
- the intermediate survey
- the class renewal survey
- the propeller shaft survey
- the bottom survey/underwater inspection
- the steam boiler/thermal oil plant and pressure vessels survey,

as well as surveys for the maintenance of Class Notations, where applicable. The surveys are to be carried out in accordance with the intervals and conditions laid down in this Section.

When there are no specific survey requirements for Class Notations assigned to a unit, the equipment and/or arrangements related to these Class Notations are to be examined, as applicable, to the Surveyor’s satisfaction at each class annual, intermediate or renewal survey.

The surveys are to be carried out in accordance with the relevant requirements in order to confirm that the hull/structure, machinery including electrical installation, equipment and appliances comply with the applicable Rules and remain in satisfactory condition.

When the conditions for the maintenance of type and/or service Notations are not complied with, the type and/or service Notation will be suspended and/or withdrawn in accordance with the applicable Rules given in Section 1, F.5.

The requirements for surveys apply to those items that are required according to the Rules or, even if not required, are fitted on board.

Unless specified otherwise, any survey other than bottom survey/underwater inspection, propeller shaft, steam boiler/thermal oil plant and pressure vessels survey, may be effected by carrying out partial surveys or splitting of surveys at different times to be agreed upon with GL, e.g. continuous Class surveys, provided that such a survey procedure is adequately extensive. The splitting of a survey is to be such as not to impair its effectiveness.

2.1.2 In addition to the above periodical surveys, the units are to be submitted to occasional non-periodical surveys whenever the circumstances so require.

For example, occasional non-periodical surveys will be carried out at the time of:

- updating of Classifications documents (e.g. change of the Owner, name of the mobile offshore units, flag)
- damages or suspected damage
- repairs or maintenance work
- conversions
- extraordinary surveys as parts of GL’s quality assurance system
- postponement of surveys or conditions of Class
- non-periodical surveys for change of anniversary date, postponement or advance of surveys
- remarks further to Port State Control inspections
GL reserve the right, after due consideration, to change the periodicity, postpone or advance surveys, taking into account particular circumstances.

If applicable, when a survey becomes overdue during a voyage, the following applies:

- For avoiding loss of Class, in the case of a Class renewal survey, GL may, in exceptional cases, grant an extension to allow completion of this survey, provided there is documented agreement to such an extension prior to the expiry date of the Class Certificate, and GL is satisfied that there is sufficient technical justification for such an extension, see also D.2.1.3.

- In the case of Class annual or intermediate surveys, no postponement is granted. Such surveys are to be completed within their prescribed time windows; see B.2. and C.

- In the case of all other periodical surveys and conditions of Class, extension may be granted, provided there is sufficient technical justification for such an extension.

Other surveys performed by GL - partly in connection with Classification - are listed in 2.4.

2.1.3 Surveys required for maintenance of Class, e.g. in the case of repairs, or modifications to any parts subject to Classification, are to be agreed with the local GL representation in due time, so that the measures envisaged may be assessed and supervised, as required.

2.1.4 The Surveyors are to be given access at any time to the unit and/or to the workshops, so that they may perform their duties.

The Owner is to provide the necessary facilities for the safe execution of the surveys.

For their internal examination, including close up surveys, tanks and spaces are to be safe for access.

For survey of the units fixed to the seabed by internal structures, means are to be provided to enable the Surveyor to examine the structure in a safe and practical way.

Tanks and spaces are to be sufficiently illuminated, clean and free from water, scale, dirt, oil residues, etc. to reveal significant corrosion, deformation, fractures, damage or other structural deterioration.

Approved rescue and safety equipment is to be available.

In this connection all areas to be surveyed have to be cleared, cleaned and to be made free from gas, as deemed necessary by the Surveyor.

The Class Certificates and other particulars relating to Classification are to be made available to the Surveyor on request.

2.1.5 Surveys conducted during a voyage may be agreed and credited to periodical surveys due. The prerequisites, procedures and specific conditions, e.g. weather, to be met will be fixed from case to case. The decision as to feasibility of the survey may only be taken in agreement with the Surveyor.

2.1.6 GL will inform the Owner or Operator about the status of Class, indicating the last recognized surveys and the next due dates. However, even if not provided with such information, the Owner or Operator is obliged to have the surveys stipulated by the present Rules performed.

2.1.7 GL may agree to testing and analysis procedures as a supplement to or equivalent substitute for conventional survey and inspection such as by uncovering/opening up of components.

2.1.8 GL reserve the right for given reasons, e.g. in the light of special experience gained during operation to extend the scope of survey or to carry that out with two Surveyors, if needed.

2.1.9 GL reserve the right to demand surveys to be held between the due dates of regular surveys, if this is necessary, see J.

2.1.10 If a unit has to be surveyed in a port beyond the reach of a GL Surveyor, also in the events of force majeure or of armed conflicts, GL Head Office will have to be notified. Following a review of the facts the process to be adopted will be decided by GL.

In extraordinary cases and with GL Head Office agreement, it is possible to call for an external expert, whose report is, subject to review by GL. GL will decide whether or not the unit will have to be resurveyed.

2.2 Selection of Surveyors

In principle, the acting Surveyors will be chosen by GL. However, the Operator of a classed unit is free to request that any findings of surveys or decisions which he deems to be doubtful are checked by other GL Surveyors.

2.3 Documentation, confirmation of Class

2.3.1 The records of each survey, as well as any requirements upon which maintenance of the Class has been made conditional, will be entered into the respective Survey Statement. The Surveyor’s signature on the Certificate and other documents only certifies what has been seen and checked during the particular survey.

2.3.2 The reports prepared by the Surveyor will be sent to GL Head Office. If there are no objections, the results will be published in the GL Register and the confirmation of Class effected by the Surveyor in the Certificate will acquire final validity.
2.3.3 In the Register the dates of the following surveys will be indicated:

- Class renewals I, II, III, etc.
- annual survey
- intermediate survey
- continuous Class renewal
- bottom/underwater and propeller shaft survey
- boiler surveys

Records on periodical repeat tests on steam boilers and thermal oil heaters will be entered in special Test Certificates, which are to be kept on board.

2.3.4 A confirmation of Class effected by the Surveyor relates to the kind of survey referred to in the report and is valid under the reservation that examination will not give cause for any objections, see 2.3.2.

2.3.5 Upon request, Class may be confirmed in writing by a separate Certificate. However, such Certificates are valid only if issued by GL Head Office or in exceptional cases, Head Office has expressly authorized the field service representatives to do so.

2.3.6 Where defects are repaired provisionally only, or where the Surveyor does not consider immediate repairs or replacements necessary, the unit’s Class may be confirmed for a limited period by making an entry in the Survey Statement to the Certificate of Classification. Cancellation of such limitations will also have to be indicated in the Survey Statement, see also Section 1, F.2.

2.4 Surveys in accordance with flag state regulations

2.4.1 Where surveys are required on account of international conventions and of corresponding laws/official ordinances of a flag state, GL will undertake them on application, or by official order, acting on behalf of the Authorities concerned, based on the respective provisions; this includes e.g. surveys according to:

- the International Convention on Load Lines (ILC 66)
- the International Convention for the Safety of Life at Sea (SOLAS 74) for self-propelled units
- the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78)
- the related Conventions of the International Labour Office (ILO)
- Code for the Construction and Equipment of Mobile Offshore Drilling Units (MODU)

Where possible, such surveys will be carried out simultaneously with the Class surveys.

2.4.2 GL will also undertake on request other surveys and checks stipulated by additional regulations and requirements of the flag state. Such surveys are subject to agreements made in each individual case and/or to the regulations of the country concerned.

2.4.3 All activities as outlined in 2.4.1 and 2.4.2 and, where applicable, issuance of relevant Certificates are likewise subject to the general conditions of Section 1.

2.4.4 If for some reason a unit’s Class has expired or has been withdrawn by GL, all statutory Certificates issued by GL, if any, will automatically become void. If subsequently the Class is renewed or re-assigned, the validity of these Certificates will be revived within the scope of their original period of validity, provided that all surveys meanwhile having fallen due have been carried out.

2.5 External service suppliers

Personnel or firms engaged in services affecting Classification and statutory work are subject to approval by GL.

The inspection, measuring and test equipment used in workshops, shipyards and on board units, which may form the basis for Surveyor’s decisions affecting Classification or statutory work, shall be appropriate for the services to be performed. The firms shall individually identify and calibrate each item of such equipment to a recognized national or international standard.

B. Periodical Surveys for Units

1. General

1.1 The periodical surveys listed in the following are to be conducted for the hull/structure, machinery including electrical installations as well as special equipment and installations included in the Classification of the unit.

The conditions for the maintenance of type and/or service Notations are to be checked for compliance at each periodical survey; the type and/or service Notation will be suspended and/or withdrawn in accordance with the applicable Rules given in Section 1, F.5., if the relevant rules are not complied with.

If for some obvious reason, e.g. a temporary out-of-service condition of certain equipment, parts included in the Classification cannot be surveyed, this will be noted in the Survey Statement/Certificate.

1.2 Where statutory regulations are applicable which impose inspection intervals deviating from the Class related intervals, where possible, the intervals will be harmonized in the individual case to reduce the number of single surveys.
1.3 In principle, elements covered by the Classification and submitted to a Class renewal survey on a date different from the date of the periodical Class renewal survey of the unit, they are to be re-examined p years after the previous survey.

1.4 An inspection schedule agreed upon between Owner/Operator and GL will be set up for the unit, in accordance with the following indications and adapted to the individual service conditions, see also 1.10.

1.5 When completed, the individual survey will be noted in the Class Certificate, including any necessary observations.

1.6 For units where dry-docking is not practicable at close intervals, special diving devices, vehicles or diver assist systems have to be used, which are suitable for the configuration and conditions of the individual structure. The suitability of such devices and systems and their deployment within the inspection scheme are subject to approval and will be reviewed in the course of inspections carried out and experience gained.

1.7 The general procedure of survey consists in:
- an overall examination of the parts covered by the rule requirements
- checking of selected items covered by the rule requirements at random
- attending tests and trials, where applicable and deemed necessary by the Surveyor

1.8 When a survey results in the identification of significant corrosion, structural defects or damage to hull/structure, machinery and/or any piece of its equipment which, in the opinion of the Surveyor affect the Class of the unit, remedial measures are to be implemented before the unit continues in service.

1.9 GL’s survey requirements cannot be considered as a substitute for specification and acceptance of repairs and maintenance, which remain the responsibility of the Owner.

1.10 Survey planning and record keeping

1.10.1 A specific Survey Program for Class renewal surveys is to be prepared out in advance of the Class renewal survey by the Owner in cooperation with GL. The Survey Program shall be in written format.

1.10.2 For bottom surveys, drydocking or underwater inspection in lieu of drydocking, plans and procedures 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 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 GL, will be subject to revision if found to be necessary in light of experience.

2. Annual surveys

2.1 Due dates

Annual surveys are to be held within 3 months before or after each anniversary date from the date of the initial Class survey or from the date credited for the last Class renewal survey.

2.2 Scope

2.2.1 General

The survey consists of an examination for the purpose of ensuring, as far as practicable, that hull/structure, the machinery including electrical installations and equipment are maintained in a satisfactory condition.

The requirements for all ship-type units are defined in the GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 3, C.1.1 and are to be observed as far as applicable.

2.2.2 Hull, structure and equipment

2.2.2.1 The annual survey will generally cover visual examination of all important structural elements readily accessible, with regard to deformations, cracks, corrosion, etc. Where a special inspection plan has been prepared, the corresponding indications have to be observed, i.e. critical areas with stress concentrations, locations with previous repairs, etc.

2.2.2.2 The type, location and extent of corrosion control, e.g. coatings, cathodic protection systems, etc., as well its effectiveness and repairs or renewals shall be reported at each survey, see also Chapter 4, Section 6.

2.2.3 All units

At each annual survey the exposed parts of the hull/structure, deck, deck houses, structures attached to the deck, derrick and cranes supporting structure, accessible internal spaces, and the applicable parts as listed below are to be generally examined and placed in satisfactory condition as found necessary:
- 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 outside walls of enclosed superstructures
- closing appliances for all the above, including hatch covers, doors, check valves, together with their respective securing devices, dogs, sills, coamings and supports
- freeing ports together with bars, shutters and hinges
- windlass and attachments of anchor racks and anchor cables
- protection of the crew, guard rails, lifelines, gangways, and deck houses accommodating crew

2.2.4 Surface type units
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 are to be checked.

2.2.5 Self-elevating units
The following parts are to be checked:
- jack-house structures and attachment to upper hull or platform
- self-elevating systems and leg-guides, externally
- legs as accessible above the waterline
- plating and supporting structure in way of leg wells

2.2.6 Column-stabilized units
- Columns, diagonal and horizontal braces together with any other parts of the upper hull supporting structure as accessible above the waterline are to be checked.
- Mooring/positioning equipment

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 GL. If GL deems such survey to be necessary, the extent should be agreed to by GL and the Owner or Operator prior to commencement of the survey.

2.2.7 Thickness measurements
If the Surveyor has reason to suspect inadmissible corrosion, he may require the rust to be removed from parts of the structure and advanced thickness measurements to be carried out, see also 1.8 for inadmissible corrosion.

2.2.8 Material or other alterations and position of load lines
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, if applicable.

2.2.9 Machinery
2.2.9.1 A visual examination is to be made of all spaces containing machinery, boilers, pressure vessels, electrical installations, etc. essential for operation of the unit, especially with regard to fire and explosion hazards.

Existing safety plans are to be checked and functioning of safety and alarm devices and of the ventilation system to be verified as far as practicable.

Special equipment such as cranes, life-saving and drilling equipment are to be surveyed according to instructions issued in each individual case, if included in the Classification procedure.

2.2.9.2 All units
In addition, a general examination of hazardous areas, remote shutdown arrangements, self-elevating systems, piping systems and bilge systems is to be made.

2.2.9.3 Self-elevating units
On self-elevating units, the jacking machinery is to be examined (general condition, damages) and tested where practicable and the existing protocols/diaries reviewed with regard to the prescribed controls and safety checks.

2.2.9.4 Special features for mobile offshore drilling units
Mobile offshore drilling units may have many special items of machinery and electrical equipment not found on conventional ships. The items mentioned in D.2.6 are to be examined in an analogous manner and reported at all Class annual surveys.

C. Intermediate Surveys

1. Survey period
1.1 Due dates
An intermediate survey, if requested, is due at half the nominal time interval between two Class renewal surveys, i.e. every \( \frac{p}{2} \) years, and may be performed either at the second or third annual survey. Additional items to the annual survey may be performed either at or between the second or third annual survey.
2. Scope

2.1 General

Intermediate surveys are generally to be performed to the extent of annual surveys including any additional items, such as related to a survey inspection programme, if any.

Additionally, the requirements for all ship-type units are defined in the GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 3, C.1.2, and are to be observed as far as applicable.

2.2 Special features for mobile offshore drilling units

Mobile offshore drilling units may have many special items of machinery and electrical equipment not found on conventional ships. The items mentioned in D.2.6 are to be specially examined in an analogous manner and reported upon at all Class intermediate surveys.

D. Class Renewal Surveys

1. Survey period

1.1 Due dates

Class renewal surveys, also called special surveys are to be carried out at the intervals p indicated by the Character of Classification.

A Class renewal survey may be carried out in several parts. The survey may be commenced at the last annual survey during the Class period and must have been completed by the end of the Class period. The total survey period of the Class renewal survey must not exceed 15 months.

Regarding bottom survey, see E.

The new period of Class will commence:
- the day after the day the previous Class expires, provided that the Class renewal survey has been completed within the 3 months preceding that date. This applies also to a granted extension of Class.
- the day on which the Class renewal survey has been completed, provided that the Class renewal survey has been completed more than 3 months before expiry of the previous Class.

For further details see GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 3, B.1.3.

1.2 Class renewals for hull are numbered in the sequence I, II, III, etc. Regarding their scope, see 2.

1.3 The Class renewal surveys may be performed in various alternative survey modes, e.g.:
- Partial Class Renewal Survey System
- Continuous Class Renewal Survey System
- Planned Maintenance Survey System
- Condition Monitoring Survey System, etc.

For details, see GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 3, B.1.3.

2. Scope

2.1 General

2.1.1 In addition to the annual, intermediate and bottom survey requirements, the Class renewal surveys shall include tests and checks of sufficient extent to assure that the hull, structures, equipment and machinery are in satisfactory condition and that the offshore unit is fit for its intended purpose for the period of Class to be assigned subject to proper maintenance and operation and the periodical surveys carried out at the assigned due dates.

Additionally, the requirements for all ship-type units are defined in the GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 3, C.1.3, and are to be observed as far as applicable.

2.1.2 Special requirements for Class Renewal of units of unusual design, in lay-up or in unusual circumstances will be determined on individual basis in a survey inspection programme.

2.1.3 Class extension surveys

Upon request of the Owner and in exceptional cases, extension of the Class period may be granted by GL. Following surveys of hull and machinery afloat, GL may extend the Class period p by no more than 3 months in total, provided that the surveys show that hull and machinery including electrical installations are in acceptable condition, see also A.2.1.2.

In this case, the last survey in dry-dock, or equivalent, must not date back more than 5 years, counting from the date of the respective Class renewal survey.

2.2 Hull, structures and equipment

2.2.1 Class Renewal I

Class Renewal I will have to be performed at the end of the first Class period p.

2.2.1.1 All units

One or more of the following crack detection test methods may be required if deemed necessary by the Surveyor:
- radiography test (X or gamma rays)
- ultrasonic test
- magnetic particle test
- dye penetrant test, etc.
If deemed necessary by the Surveyor, defective cement, asphalt covering or other coating is to be removed. The steel work is to be examined before painting or before the cement or other coverings are renewed.

- 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 damages, fractures, or excessive wastage. Thickness measurements of plating and framing may be required where wastage is evident or suspected.

- All tanks, compartments and free-flooding spaces throughout the unit are to be examined externally and internally for excess wastage or damage.

- Internal examinations of spud cans and mats are to be specially considered.

- Watertight integrity of tanks, bulkheads, hull, decks and other compartments is to be verified by visual inspection.

- Suspect areas may to be tested for tightness, non-destructive tested or thickness gauged.

- 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 wastage.

- 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, or other non-corrosive products may be waived provided that upon a general examination the Surveyor considers their condition to be satisfactory. External thickness measurements 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 measurements are to be carried out where wastage is evident or suspect.

### 2.2.1.2 Self-elevating units

The following parts have to be checked in addition to those defined in B.2.2.5:

- all legs, including chords, diagonal and horizontal braces, gussets, racks, joints, together with leg guides are to be examined
- 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 walls; non-destructive testing of suspect areas may be required
- leg jacking or other self-elevating systems externally and internally
- leg connections to bottom mats or spud cans, including non-destructive testing of leg connections to mats or spud cans
- internal examinations of spud cans and mats are to be specially considered
- jetting piping systems or other external piping, particularly where penetrating mats or spud cans
- spud cans or mats; where the spud cans or mats are partly or entirely obscured below the mud line where the Class renewal survey is otherwise being completed, consideration will be given to postponement of the examinations until the next rig move

### 2.2.1.3 Column-stabilized units

The following parts have to be checked in addition to those defined in B.2.2.6:

- 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 suspect areas

### 2.2.2 Class Renewal II and subsequent ones

The age of the unit is $p$ to $2p$ years for Class renewal II and $np$ for the subsequent ones. The requirements for the second Class Renewal and the subsequent ones shall be as comprehensive and include at least those of Class Renewal I, with special attention being given to the condition and thickness of material in high corrosion areas. Representative thickness measurements will be required and are to be specified in advance by GL. 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, as far as applicable.

Additionally, the requirements for all ship-shaped units are defined in the GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 3, C.1.3, and are to be observed as far as applicable.

2.3 Machinery including electrical installations

Except for individual machinery items contained in H. the scopes of all Class renewal surveys for the machinery installation including electrical installations are identical. If the continuous Class renewal system or other relevant survey mode is applied, 1.3 is to be observed.

2.3.1 Machinery and equipment

In addition to the annual and intermediate survey, an extended examination of machinery spaces and installations will generally include, as far as applicable:

- Close inspection of machinery foundations
- Opening/internal inspection of pressure vessels and heat exchangers according to an approved inspection plan
- Pressure and operability testing of pipe systems according to an approved inspection plan
- Inspection and testing of fire protection installations and fire fighting equipment.

Regarding special equipment, see B.2.2.9.1.

Applicable regulations of the Administration are to be complied with.

2.3.2 Electrical installation

The electric equipment including the generators, the motors of the essential auxiliary machinery, all switch gear including their protective and interlocking devices, as well as the cable network are to be examined and tested.

Where electrical installations, particularly explosion protected machines and apparatus, are situated in spaces in which there is danger of inflammable gas or steam air mixtures, they are subject to examinations concerning their ex-protection as well as IP-protection.

In addition to the general indications given above, the following is to be observed:

- 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 over fused.
- 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 emergency remote switch-off devices of ventilators, fuel pumps, oil fired equipment and similar equipment are to be tested.

Additionally, the requirements for all units are defined in the GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 3, C.1.3 and are to be observed, as far as applicable.

2.4 All units, fire extinguishing and fire alarm systems

The requirements for all units are defined in the GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 3, C.1.3 and are to be observed, as far as applicable.

2.5 Automation and remote control system

In addition to the requirements of annual surveys the following parts 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 subjected to dock trials at reduced power on the propulsion engine to ensure the proper performance of all automatic functions, alarms and safety systems

Additionally, the requirements for all ship-type units are defined in the GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 3, C.1.3 and are to be observed, as far as applicable.
2.6 Special features for mobile offshore drilling units

Mobile offshore drilling units may have many special items of machinery and electrical equipment not found on conventional ships. The following items are to be specially examined and reported upon at all Class renewal surveys:

2.6.1 Hazardous areas

- enclosed hazardous areas such as those containing open active mud tanks, shale shakers, degas-sers 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 are to be proven satisfactory

- electrical motors are to be examined including closed-loop ventilating systems for large DC motors

- automatic power disconnect to motors in case of loss of ventilating air are to be proved satisfactory

2.6.2 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 switches for all electrical equipment including main and emergency generators, except alarm and communication systems and lighting in essential areas such as escape routes and landing platforms, are to be proved satisfactory

2.6.3 Fire fighting equipment and fire alarm systems

A general examination of the fire detection and extinguishing apparatus is to be made in order that the Surveyor may be satisfied with its efficient state. The following items are to be especially examined:

- fire hoses, nozzles and spanners at each fire station

- servicing of all portable soda-acid and foam extinguishers

- weighing and re-charging as necessary of all dry chemical and CO₂ extinguishers

- fire pumps and piping including operation and capacity

- alarm systems

Additionally, the requirements for all units are defined in the GL I – Ship Technology, Part 0 – Classification and Surveys, Section 3, C.1.3 and are to be observed, as far as applicable.

2.6.4 Self elevating systems

- 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

2.6.5 Piping systems

Piping systems used solely for drilling operations and complying either with the GL requirements or a recognized standard are to be examined, as far as practicable, operationally or hydrostatically tested to working pressure, to the satisfaction of the Surveyor.

2.6.6 Miscellaneous

Bilge alarm systems, if fitted, to be tested.

2.7 Trials

Upon completion of the surveys for Class Renewal, the Surveyor must be satisfied that the entire machinery installation, including the electrical machinery and equipment including the steering gear, if applicable, is operable without any restrictions. In case of doubt, this may have to be proved by trials and/or operational tests.

E. Periodical Bottom Surveys

1. Survey Period

1.1 Due dates

The outside shell and related items of units are to be examined two times in any year Class period between two Class renewal surveys, with an interval not exceeding three years between examinations. On request the survey interval may be increased by GL for units operating in salt water for less than six months each year.

Consideration may be given at the discretion of GL to any special circumstances justifying an extension of the interval. In exceptional circumstances, an extension of examination of the mobile offshore unit’s
bottom/structure of 3 months beyond the due date can be granted.

1.2 Alternative means of examination

Proposals for alternative means of examining the unit’s shell and related items while afloat may be considered, provided they are in general agreement with 3.

1.3 Planning of survey

Plans and procedures for bottom surveys see B.1.10.2. Intermediate survey performance in dry-dock has to be considered, if the mobile offshore unit’s age exceeds 15 years.

It is also expected that for each bottom survey performed in addition to the bottom surveys stipulated by the Classification requirements a GL Surveyor will be called to attend.

Additionally, the requirements for all ship-type units are defined in the GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 3, C.1.6 and C.1.7, and are to be observed as far as applicable.

2. Drydocking surveys

2.1 General

For the survey the unit is to be placed in the dock on sufficiently high and secure blocks, so that all necessary examinations can be carried out. It may be necessary to clean the bottom and outer shell and/or remove rust from some areas.

In exceptional circumstances an underwater inspection according to 3. may be carried out in lieu of drydocking, see also 1.1.

Additionally, the requirements for all ship-type units are defined in the GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 3, C.1.6, and are to be observed as far as applicable.

2.2 Ship-shaped or barge type units

– external surfaces of the hull, keel, stem, stern frame are to be selectively cleaned to the satisfaction of the attending Surveyor and examined
– sea chests, sea and discharge valves, sea strainers and water drain pipes including their closures are to be cleaned, examined to be opened up and overhauled once within a period of Class

2.3 Self-propelled units

In addition to the items defined in 2.2 the following elements have to be examined:

– rudder, nozzles and scuppers together with appendages are to be selectively cleaned to the satisfaction of the attending Surveyor
– the propeller(s), exposed parts of stern bearing assembly, rudder pintle and gudgeon securing arrangements
– rudder bearing and steering nozzle clearances are to be ascertained and reported upon; if considered necessary in view of the inspection results, the rudder or parts of the steering gear is to be dismounted
– the steering gear is to be subjected to an operational trial
– bow-thrusters are to be inspected externally
– for propellers, propeller shaft(s), stern tube, see G.

2.4 Self-elevating units

In addition to the requirements of 2.2 and 2.3 the following items have to be considered as far as applicable:

– 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 after Class renewal survey II, 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 by GL for areas considered to be critical or found to be suspect by the Surveyor

2.5 Column-stabilized units

In addition to the requirements of 2.2 and 2.3 the following items have to be considered as far as applicable:

– external surfaces of the upper hull or platform, footings, pontoons or lower hulls, underwater areas of columns, bracings 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 by GL for areas considered to be critical or found to be suspect by the Surveyor
3. Underwater surveys

3.1 General

3.1.1 The procedures and conditions under which a properly conducted underwater inspection may be credited as equivalent to a dry-docking survey are defined in the following.

3.1.2 The diving firm assisting in in-water surveys must be approved by GL for this purpose. Validity of an approval granted will depend on the continued qualification for satisfactorily carrying out the work required. The approval will have to be renewed after a period not exceeding 5 years.

3.1.3 Additionally, the requirements for all ship-type units are defined in the GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 3, B.1.7 and C.1.7, and are to be observed as far as applicable.

3.2 Conditions for underwater surveys

3.2.1 Limitations

Underwater inspections in lieu of drydocking survey may not be acceptable where there is a 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 survey.

3.2.2 Thickness measurements and non-destructive testing

Underwater internal thickness measurements 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. Plans and procedures for bottom surveys see B.1.10.2.

3.2.3 Underwater conditions

The areas to be surveyed are to be sufficiently clean and the seawater clear and calm enough to permit meaningful examination and photography, if necessary, by the diver. The shell/structure sides below the waterline and the bottom must be free from fouling and overall or spot cleaning may be required.

3.3 Physical features

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

3.3.1 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 depth 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 unit’s records and in the survey report.

3.3.2 Rudder bearings

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

3.3.3 Sea suction

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

3.3.4 Sea valves

For the underwater survey associated with the Class renewal survey, means must be provided to examine any sea valve.

3.4 Procedures

3.4.1 Exposed areas

The unit should be in light ship condition. An examination of the outside of the structure above the waterline is to be carried out by the GL Surveyor. Means and access are to be provided to enable the Surveyor to accomplish visual inspection and non-destructive testing as necessary.

3.4.2 Underwater areas

Underwater areas are to be surveyed and/or relevant maintenance work is to be carried out with assistance by a diver of an approved firm whose performance is controlled by a Surveyor, using an underwater camera with monitor, communication and recording systems. The underwater pictures on the surface monitor screen must offer reliable technical information such as to enable the Surveyor to judge the parts and/or the areas surveyed. If applicable, the effectiveness of the corrosion protection system (potential measurements, condition of anodes, etc.), the marine growth and the condition of foundations (changes in topography/scouring, settlement) are to be inspected.

3.4.3 Damage areas

Damage areas are to be photographed. Internal examination, measurements, marking and thickness measurements 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. Documentation suited for reproduction (video tape with sound) is to be made available to GL.
If damages are found which can be reliably assessed only in dry-dock or require immediate repair, the unit is to be dry-docked. If the coating of the underwater body is in a condition which may cause corrosion damages affecting unit’s Class to occur before the next dry-docking, the unit is to be dry-docked.

Where, for instance, grounding is assumed to have taken place, the Surveyor may demand individual parts of the underwater body to be additionally inspected from inside.

F. Ballast Spaces

1. Survey period

1.1 Due dates

In conjunction with drydocking surveys, or equivalent, after Class renewal survey No. 1 and between subsequent Class renewal surveys, the following ballast spaces 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 verification that the corrosion control arrangements remain effective.

1.2 Additionally, the requirements for all vessel-type units are defined in the GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 3, B. and 4, and are to be observed as far as applicable.

2. Scope

2.1 All units

Particular attention is to be given to corrosion control systems in ballast spaces, free-flooding areas and other locations subjected to seawater from both sides.

Additionally, the requirements for all ship-type units are defined in the GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 3, C. and 4, and are to be observed as far as applicable.

2.1.1 Surface type units

One peak tank and at least two other representative ballast tanks between the peak bulkheads used primarily for water ballast are to be internally examined, thickness gauged, placed in satisfactory condition as found necessary and reported upon.

2.1.2 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 are to be internally examined, thickness gauged, placed in satisfactory condition as found necessary and reported upon.

2.1.3 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 are to be internally examined, thickness gauged, placed in satisfactory condition as found necessary and reported upon.

G. Propeller and Tube Shaft Surveys

1. Survey period

1.1 Propeller shafts and tube shafts

For maintenance of the Class, periodical surveys and tests of propeller shafts and tube shafts, propellers and other systems are to be carried out.

The following surveys are applicable:

- normal survey
- modified survey
- partial survey

The requirements regarding the due dates are defined in the GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 3, B.1.4 and are to be observed as far as applicable.

1.2 Propellers

During normal or modified surveys of the propeller shafts and tube shafts, the propellers as well as the remote and local control gear of controllable pitch propellers are to be surveyed at the Surveyor’s discretion, depending on the findings.

1.3 Other systems

Other systems for main propulsion purposes, such as rudder and steering propellers, pod propulsion systems, pump jet units, etc. are subject to the same survey intervals as the propeller shafts and tube shafts.

2. Performance and Scope

2.1 Propeller shafts and tube shafts

The requirements regarding the performance are defined in the GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 3, B.1.4 and are to be observed as far as applicable.

2.2 Propellers

Propellers are to be examined visually on the occasion of each propeller shaft or tube shaft survey.

Damages, such as cracks, deformation, cavitation effects, etc. are to be reported and repaired at the Surveyor’s discretion.
Controllable pitch propellers are to be checked for oil leakage. The function of controllable pitch propellers has to be tested. The maintenance according to fabricator’s instructions has to be checked.

2.3 Other systems
As far as practicable, the gearing and control elements of rudder and steering propellers are to be examined through inspection openings. For other systems such as pod propulsion systems, pump jet units, etc. the scope of survey is to be agreed with GL Head Office. The maintenance according to fabricator’s instructions is to be checked. A function test is to be carried out.

H. Periodical Surveys of Individual Machinery Items

1. Due dates
The periodical surveys of individual machinery items or installations listed in the following are to be carried out in addition to those prescribed for the Class renewal surveys for maintenance of Class.

The requirements regarding the due dates are defined in the GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 3, B.1.5, and are to be observed as far as applicable.

2. Scope
The following machinery items are to be surveyed:
- steam boilers
- thermal oil plants
- steam pipes / heating coils
- pressure vessels

The requirements regarding the scope are defined in the GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 3, C.1.5 and are to be observed as far as applicable.

I. Thickness Measurements and Corrosion Tolerances

1. General

1.1 The thickness of structural elements is checked by measurements, in order to assess whether or not the values stipulated in GL Rules are observed, taking into account the admissible tolerances. Unless severe corrosion has occurred owing to particular service conditions, thickness measurements will not be required until Class Renewal II, see D.2.2.2.

1.2 Thickness measurements are to be carried out in accordance with recognized methods, by authorized personnel or companies, see 2. Rust and contamination are to be removed from the components to be examined. The Surveyor is entitled to require check measurements or more detailed measurements to be performed in his presence. The thickness measurements on board are to be witnessed by the Surveyor. This requires the Surveyor to be on board while measurements are taken, to the extent necessary to control the process.

The scope of thickness measurement as well as the reporting shall be fixed in a survey planning meeting between the Surveyor(s), representatives of the Owner and the approved thickness measurement operator/firm well in advance of measurements and prior to commencing the survey.

Thickness measurements of structures in areas where close-up surveys are required shall be carried out simultaneously with the close-up surveys.

2. Authorization

2.1 The personnel or the company entrusted with thickness measurements, as well as the procedure for documentation must be approved by GL for this purpose.

2.2 Validity of an approval granted will depend on the continued qualification. The approval will have to be renewed after a period not exceeding 3 years.

3. Scope of measurements
For units which are not ship-shaped, the scope of thickness measurement as well as the reporting depends upon the particular unit, and shall be documented by the GL Head Office in advance of measurements and prior to commencing the survey.

The requirements for ship-shaped units are defined in the GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 3, C. and Section 4, and are to be observed as far as applicable.

J. Non-periodical Surveys

1. Damage survey
It is the responsibility of the owner/operator of the unit to report to GL without delay any suffered damage, defect or breakdown, which could invalidate the conditions for which a Classification has been assigned, or if damage may be assumed to have occurred as a consequence of an average or other unusual event, so that it may be examined at the earliest opportunity by the GL Surveyors. All repairs found necessary by the Surveyor shall be carried out to his satisfaction.
2. Repairs

2.1 Where repairs to hull, legs, jacks, other structures, machinery or equipment, which affect or may affect Classification, are planned in advance, a complete repair procedure including the extent of the proposed repair and the need of the Surveyors attendance shall be submitted to and agreed upon by GL reasonably in advance. Failure to notify to GL, in advance of the repairs, may result in suspension of the 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.

2.2 The requirements of 2.1 are not intended to include maintenance and overhaul to hull, structures, machinery and equipment in accordance with recommended manufacturers procedures and established marine practice and which do not require GL approval. However, any repair as a result of such maintenance and overhauls which affects or may affect Classification is to be noted in the log of the unit and submitted to the Surveyor.

2.3 Surveys conducted in the course of repairs are to be based on the latest experience and instructions by GL. In exceptional cases advice is to be obtained from the concerned Head Office departments, in particular where doubts exist as to the cause of damage.

2.4 For older units, in the case of repairs and/or replacement of parts subject to Classification, as a matter of principle, the Construction Rules in force during their period of construction continue to be applicable.

This does not apply in the case of modifications required to the structure in the light of new knowledge gained from damage analyses, with a view to avoiding recurrence of similar damages.

2.5 Regarding the materials employed and Certificates required, the requirements for new constructions are applicable, see 7.2.

2.6 Regarding damages or excessive wastage beyond allowable limits that affect the unit’s Class, see D.2.2.1.1.

3. Reactivation surveys or recommissioning

In the case of units which have been out of service for an extended period, the requirements for reactivation surveys or recommissioning will be specially considered in each case with due regard given to the status of surveys at the time of commencement of the lay-up period, the length of period and conditions under which the unit has been maintained during that period.

4. Conversion or alteration surveys

No conversions or alterations which may affect Classification shall be made to hull and machinery of a classed unit unless plans of proposed alterations are submitted and approved by GL before the work of alterations is commenced. Such work shall be carried out in accordance with approved plans and tested on completion as required by the Rules and to the satisfaction of the Surveyor. A new or amended Class designation will be assigned, where necessary.

5. Extraordinary surveys

GL reserve the right to require Extraordinary Surveys to be held independently of any regular surveys. Such surveys may become necessary for examining the technical condition of a unit and are understood to form a part of GL’s Quality Assurance System.

6. Survey for towage or voyage over sea

In compliance with the provisions of the General Conditions, a Certificate of towage or voyage of a unit over sea may be issued upon satisfactory survey, the scope of which is fixed in each particular case by GL according to the towing or voyage over sea.

7. Welding and replacement of materials

7.1 Welding of steels, including higher strength hull structural steel, shall be to the satisfaction of GL.

7.2 Welding or other fabrication performed on steels of special characteristics or repairs or renewals of such steel or in areas adjacent to such steel shall be accomplished with procedures approved by GL considering the special materials involved. Substitution of steels differing from those originally installed shall not be made without approval by GL.

8. The requirements for non-periodical surveys for ship-shaped units are defined in the GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 3, B.2. and C.4., and are to be observed as far as applicable.
Section 4

Class Designation for Fixed Offshore Installations

A. General

1. Definitions

1.1 The Class of a fixed offshore installation complying with these GL Rules is expressed by the “Character of Classification”, assigned to structure and machinery including electrical installations, see B.

1.2 Details about structure, machinery including electrical installations as well as special equipment and installations included in the Classification procedure are indicated by “Notations” affixed to the Character of Classification, see C.

1.3 The Character of Classification and the Notations give the scope according to which the Class of the installation has been based and refer to the specific rule requirements which are to be complied with for their assignment. In particular, the Classification Character and Notations are assigned according to the type and service of the installation and other criteria, which have been provided by the prospective Owner, building yard or other subcontractors, when requesting for Classification.

1.4 GL may change the Character of Classification or the Notations at any time, when the information available shows that the requested or already assigned Notations are not suitable for the intended type, service, location and any other criteria taken into account for Classification.

1.5 The Character of Classification and Notations assigned to an installation are indicated on the Certificate of Classification, as well as in the Register.

1.6 The Character of Classification and Notations applicable to existing installations conform to the Rules of GL in force at the date of assignment of Class. They may however be updated on request according to the current Rules, as far as applicable.

2. Class designation

Table 4.1 shows examples for a Class designation for structures and machinery.

<table>
<thead>
<tr>
<th>Structures</th>
<th>Structure</th>
<th>Machinery</th>
<th>Machinery</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIXED OFFSHORE STRUCTURE; PILE FOUNDATION</td>
<td>A-MC</td>
<td>EC</td>
<td></td>
</tr>
</tbody>
</table>

B. Characters of Classification

1. Structure

1.1 Character of Classification

100Ap The installation’s structure fully complies with the requirements of the Construction Rules of GL or other rules considered being equivalent.

90Ap, 80Ap, 70Ap (as examples): The structure does not fully comply with the requirements of the Construction Rules of GL; however, the Class may be maintained for a shorter period and/or with shorter survey intervals. The figures 100, 90, etc. indicate the maintenance condition of the structure in relation to the requirements of the Construction Rules, taking into account the permissible corrosion and wear tolerances.

1.2 Class period

p The Character p shown in 1.1 indicates the duration of the nominal Class period in years.

Normally: p = 5

The nominal Class period may be extended, if after survey of the installation and examination of the maintenance scheme of the installation, GL is convinced that compliance with the Rule requirements can be assured for this extended period, see also Section 5.
The nominal Class period can be reduced in exceptional cases and for a limited time, if the installation does not fully comply with the Rules but has been allowed to operate under restrictions, e.g. regarding the service range and/or weather conditions. A lower degree of compliance may be indicated, in exceptional cases, by a Character of Classification less than 100 A (e.g. 80A).

2. Machinery

A-MC The machinery of the installation, complies with the requirements of the Construction Rules of GL or other rules considered being equivalent.

A-MC: The machinery does not fully comply with the requirements of the Construction Rules of GL, but functional safety and seaworthiness are ensured for the envisaged service.

3. Survey, supervision of construction

The characters have the following meaning:

 Structure, machinery and/or special equipment have been constructed:

- under the supervision of GL at the building yard and/or at subcontractors supplying construction components and
- with Certification by GL of components and materials requiring inspection, subject to the GL Construction Rules

 Structure, machinery and/or special equipment have been constructed:

- under the supervision of GL at the building yard and/or at manufacturers supplying structural components and
- without Certification by GL of components and materials requiring inspection, subject to the GL Construction Rules

 Structure, machinery installation or special equipment have been constructed under the supervision of and in accordance with the rules of another recognized Classification Society and have later on been classed with GL.

C. Notations affixed to the Character of Classification

1. General

1.1 There are different kinds of Notations, describing particular features, capabilities, service restrictions or special equipment and installations included in the Classification, as defined in the following.

1.2 The Notations to be affixed to the Character of Classification are optional and may be elected by the prospective Owner or building yard. The chosen scope of Notations has to be defined in the Classification specification as well as in the building specification.

1.3 Generally, the type and/or service Notations will be assigned according to the indications or suggestions of the prospective Owner or building yard.

1.4 The Notations define the type and/or service of the installation, which have been considered for its Classification, according to the request for Classification signed by the prospective Owner or building yard. The assignment of any Notation to a new construction is subject to compliance with the general rule requirements laid down in the Construction Rules.

1.5 The Notations applicable to existing installations conform to the Rules of GL in force at the date of assignment of Class. However, at the request of the Owner and as far as applicable, the Notations of existing installations may be updated according to the current GL Rules.

1.6 A Notation may be complemented by one or more Notations, giving further precision regarding the type and/or service of the installation, for some of which specific rule requirements are applied.

1.7 At the request of the Owner and as far as applicable, GL reserve the right to grant other Class Notations as defined in other GL Rules. The Class maintenance surveys for such Class Notations are to be performed to the corresponding requirements in the other GL Rules.

2. Notations for the structure

2.1 Installation type

The following types of installation may be distinguished, e.g.:
FIXED OFFSHORE STRUCTURE, PILE FOUNDATION

Notation for installations fixed on the seabed by means of piles.

FIXED OFFSHORE STRUCTURE, GRAVITY FOUNDATION

Notation for installations supported on the seabed by action of gravity only.

FIXED OFFSHORE STRUCTURE, TENSION LEG PLATFORM

Notation for buoyant installations connected to a fixed foundation or piles by means of pre-tensioned tendons.

2.2 Installation out of operation

INSTALLATION OUT OF OPERATION

Notation for installations, which are not in active operation and the Class Renewal Survey of which has been substituted, compare Section 1, F.3.

2.3 Environmental protection standards

ENVIRONMENTAL PASSPORT

Notation for installations fulfilling the requirements of the GL Rules VI – Additional Rules and Guidelines, Part 12 – Environmental Protection, Chapter 1 – Guidelines for the Environmental Service System (GL-ESS).

2.4 Special equipment and systems

Special systems, e.g. equipment covered by Classification may be referred to by a Notation affixed to the Character of Classification, such as:

EC Equipment Certified

This Notation is assigned for characteristic implements and/or equipment which have by agreement been constructed in accordance with the Rules and under supervision of GL.

EQUIPPED FOR DRILLING

Notation for installations equipped with a drilling tower and all the equipment to lengthen or shorten the drill pipe, and has all necessary auxiliary devices.

EQUIPPED FOR PRODUCTION

Notation for installations equipped with facilities for production of oil and gas to be delivered by the fully developed source.

EQUIPPED FOR PROCESSING

Notation for installations equipped with a plant for processing gas and/or oil into semi-finished products or end products.

EQUIPPED FOR FLARING

Notation for installations equipped with at least one flare or cold vent, used for the safe disposal of hydrocarbon gases and vapours and other gases associated with drilling, production and processing of mineral oil and gas.

EQUIPPED FOR STORAGE

Notation for installations equipped for storage of large gas and/or oil quantities, which act as a buffer e.g. between loading periods of transport vessels.

EQUIPPED FOR POWER TRANSFORMING

Notation for installations equipped with a power transformer which receives electric energy with high voltage and distributes this power with lower voltage to various consumers in an offshore complex and vice versa.

EQUIPPED FOR LOADING

Notation for installations equipped to serve as a loading terminal for gas or oil within a larger offshore complex.

EQUIPPED FOR ACCOMMODATION

Notation for installations equipped with large accommodation facilities for a number of special personnel within an offshore complex.

2.5 Materials

If installations are constructed of normal strength hull structural steel, this will not be specially indicated. If other materials are employed for the structure, this will be indicated in the GL Register and in the Class Certificate, e.g.:

HIGHER STRENGTH HULL STRUCTURAL STEEL

REINFORCED CONCRETE

ALUMINIUM

FRP (Fibre Reinforced Plastic)

Other materials used for structural parts will be indicated in the Register.

2.6 Novel designs

EXP Structures, machinery installations or essential parts have been constructed in accordance with a design, for which sufficient experience is not yet available. GL will decide at what intervals the required periodical surveys will have to be carried out. Where experience over a prolonged period of time has proved the efficiency of the design, the Notation EXP may be cancelled.
3. Machinery Notations

3.1 Condition Monitoring

Where a Condition Monitoring System is used to reliably determine the condition of their components depending on the minimum achieved scope of condition monitoring, one of the following Notations will be assigned to the Character of Classification for the machinery installations, compare GL Rules I – Ship Technology, Part 1 – Seagoing Ships, Chapter 17 – Guidelines for Machinery Condition Monitoring.

**CM1** Up to 3 % of the possible Condition Monitoring scope is achieved.

**CM2** Up to 10 % of the possible Condition Monitoring scope is achieved.

**CM3** Up to 20 % of the possible Condition Monitoring scope is achieved.

**CM4** More than 20 % of the possible Condition Monitoring scope is achieved.

3.2 Novel designs

**EXP** see 2.6

4. Summary of notations for fixed offshore installations

Table 4.2 gives an overview for the various Notations which may be assigned to fixed offshore installations. Additional information is given in the respective Chapters.

Table 4.2  Summary of notations for mobile offshore units

<table>
<thead>
<tr>
<th>Chapter 1 Classification, Certification and Surveys</th>
<th>Chapter 2 Mobile Offshore Units</th>
<th>Chapter 4 Structural Design</th>
<th>Chapter 5 Machinery Installations</th>
<th>Chapter 6 Electrical Installations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation type: FIXED OFFSHORE STRUCTURE, - PILE FOUNDATION - GRAVITY FOUNDATION - TENSION LEG PLATFORM</td>
<td>Special equipment certified: EC</td>
<td>Special equipment: EQUIPPED FOR ACCOMMODATION</td>
<td>Environmental standards: ENVIRONMENTAL PASSPORT</td>
<td></td>
</tr>
<tr>
<td>Non-operation status: INSTALLATION OUT OF OPERATION</td>
<td>Special systems: EQUIPPED FOR DRILLING EQUIPPED FOR PRODUCTION EQUIPPED FOR PROCESSING EQUIPPED FOR POWER TRANSFORMING EQUIPPED FOR FLARING</td>
<td>Material: HIGHER STRENGTH HULL STRUCTURAL STEEL REINFORCED CONCRETE ALUMINIUM FRP</td>
<td>Special systems: EQUIPPED FOR STORAGE EQUIPPED FOR LOADING</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Novel design: EXP</td>
<td>Condition monitoring: CM1 CM2 CM3 CM4</td>
<td>Novel design: EXP</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Diving systems: TAZ</td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>
Section 5
Survey of Fixed Offshore Installations

A. General

1. Supervision and testing during construction

During the design and construction phase of a fixed offshore installation the sequential steps of the approval procedure to obtain GL Class shall be applied successively unless otherwise specified:

- design review/approval, see Chapter 3, Section 1, C.
- survey of materials and components, see Chapter 3, Section 1, D.
- supervision of fabrication and installation on site, see Chapter 3, Section 1, D.
- testing and commissioning, see Chapter 3, Section 1, E.

2. Surveys for maintenance of Class

2.1 General requirements

2.1.1 For maintenance of Class, the regular periodical and non-periodical surveys of structure, machinery including electrical installation and any special equipment classed as defined in the following, are to be performed.

The periodical surveys include:

- the annual survey
- the intermediate survey, if requested
- the Class renewal survey
- the underwater inspection
- the steam boiler/thermal oil plant and pressure vessels survey,

as well as surveys for the maintenance of Class Notations, where applicable. The surveys are to be carried out in accordance with the intervals and conditions laid down in this Section.

When there are no specific survey requirements for Class Notations assigned to an installation, the equipment and/or arrangements related to these Class Notations are to be examined, as applicable, to the Surveyor’s satisfaction at each Class annual, intermediate or renewal survey.

2.1.2 In addition to the above periodical surveys, the installations are to be submitted to occasional non-periodical surveys whenever the circumstances so require.

For example, occasional non-periodical surveys will be carried out at the time of:

- updating of Classification documents (e.g. change of the Owner, name of offshore installations permanently fixed to the seabed, etc.)
- damages or suspected damage
- repairs or maintenance work
- conversions
- extraordinary surveys as parts of GL’s quality assurance system
- postponement of surveys or conditions of Class
- non-periodical surveys for change of anniversary date, postponement or advance of surveys

GL reserve the right, after due consideration, to change the periodicity, postpone or advance surveys, taking into account particular circumstances.
If applicable, when a survey becomes overdue, the following applies:

- For avoiding loss of Class, in the case of a Class renewal survey, GL may, in exceptional cases, grant an extension to allow completion of this survey, provided there is documented agreement to such an extension prior to the expiry date of the Class Certificate, and GL is satisfied that there is sufficient technical justification for such an extension, see D.

- In the case of Class annual or intermediate surveys, no postponement is granted. Such surveys are to be completed within their prescribed time windows; see B.2. and C.

- In the case of all other periodical surveys and conditions of Class, extension may be granted, provided there is sufficient technical justification for such an extension.

Other surveys performed by GL - partly in connection with Classification - are listed in 2.4.

2.1.3 Surveys required for maintenance of Class, e.g. in the case of repairs, or modifications to any parts subject to Classification, are to be agreed with the local GL representation in due time, so that the measures envisaged may be assessed and supervised, as required.

2.1.4 The Surveyors are to be given access at any time to the installation and/or to the workshops, so that they may perform their duties.

The Owner is to provide the necessary facilities for the safe execution of the surveys.

For their internal examination, including close up surveys, tanks and spaces are to be safe for access.

For survey of the installations fixed to the seabed by internal structures, means are to be provided to enable the Surveyor to examine the structure in a safe and practical way.

Tanks and spaces are to be sufficiently illuminated, clean and free from water, scale, dirt, oil residues, etc. to reveal significant corrosion, deformation, fractures, damage or other structural deterioration.

Approved rescue and safety equipment is to be available.

In this connection all areas to be surveyed have to be cleared, cleaned and to be made free from gas, as deemed necessary by the Surveyor.

The Class Certificates and other particulars relating to Classification are to be made available to the Surveyor on request.

2.1.5 GL will inform the Owner or Operator about the status of Class, indicating the last recognized surveys and the next due dates. However, even if not provided with such information, the Owner or Operator is obliged to have the surveys stipulated by the present Rules performed.

2.1.6 GL may agree to testing and analysis procedures as a supplement to or equivalent substitute for conventional survey and inspection such as by uncovering/opening up of components.

2.1.7 GL reserve the right for given reasons, e.g. in the light of special experience gained during operation to extend the scope of survey or to carry that out with two Surveyors, if needed.

2.1.8 GL reserve the right to demand surveys to be held between the due dates of regular surveys, if this is necessary, see H.

2.1.9 If an installation has to be surveyed in a location beyond the reach of a GL Surveyor, also in the events of force majeure or of armed conflicts, GL Head Office will have to be notified. Following a review of the facts the process to be adapted will be decided by GL.

In extraordinary cases and with GL Head Office agreement, it is possible to call for an external expert, whose report is, subject to review by GL. GL will decide on whether or not the installation will have to be re-surveyed.

2.2 Selection of Surveyors

In principle, the acting Surveyors will be chosen by GL. However, the Operator of a classed installation is free to request that any findings of surveys or decisions which he deems to be doubtful are checked by other GL Surveyors.

2.3 Documentation, confirmation of Class

2.3.1 The records of each survey, as well as any requirements upon which maintenance of the Class has been made conditional, will be entered into the respective Survey Statement. The Surveyor’s signature on the Certificate and other documents only certifies what has been seen and checked during the particular survey.

2.3.2 The reports prepared by the Surveyor will be sent to GL Head Office. If there are no objections, the results will be published in the GL Register and the confirmation of Class effected by the Surveyor in the Certificate will acquire full validity.

2.3.3 The dates of the following surveys will be indicated in the Register:

- Class renewals I, II, III, etc.
- annual survey
- intermediate survey
- continuous Class renewal
- bottom/underwater survey
- boiler surveys
Records on periodical repeat tests on steam boilers and thermal oil heaters will be entered in special Test Certificates, which are to be kept on board.

2.3.4 A confirmation of Class effected by the Surveyor relates to the kind of survey referred to in the report and is valid under the reservation that examination will not give cause for any objections, see 2.3.2.

2.3.5 Upon request, Class may be confirmed in writing by a separate Certificate. However, such Certificates are valid only if issued by GL Head Office or in exceptional cases, Head Office has expressly authorized the field service representatives to do so.

2.3.6 Where defects are repaired provisionally only, or where the Surveyor does not consider immediate repairs or replacements necessary, the installation's Class may be confirmed for a limited period by making an entry in the Survey Statement to the Certificate of Classification. Cancellation of such limitations will also have to be indicated in the Survey Statement, see also Section 1, F.2.

2.4 Surveys in accordance with coastal state regulations

2.4.1 Where surveys are required on account of international conventions and of corresponding laws/official ordinances of a coastal state, GL will undertake them on application, or by official order, acting on behalf of the Authorities concerned, based on the respective provisions; this includes surveys according to:

- the related Conventions of the International Labour Organisation (ILO)

Where possible, such surveys will be carried out simultaneously with the Class surveys.

2.4.2 GL will also undertake on request other surveys and checks stipulated by additional regulations and requirements of the coastal state. Such surveys are subject to agreements made in each individual case and/or to the regulations of the country concerned.

2.4.3 All activities as outlined in 2.4.1 and 2.4.2 and, where applicable, issuance of relevant Certificates are likewise subject to the general conditions of Section 1.

2.4.4 If for some reason the Class of an installation has expired or has been withdrawn by GL, all statutory Certificates issued by GL, if any, will automatically become void. If subsequently the Class is renewed or re-assigned, the validity of these Certificates will be revived within the scope of their original period of validity, provided that all surveys meanwhile having fallen due have been carried out.

2.5 External service suppliers

Personnel or firms engaged in services affecting Classification and statutory work are subject to approval by GL.

The inspection, measuring and test equipment used in workshops, yards and on board of installations, which may form the basis for Surveyor’s decisions affecting Classification or statutory work, shall be appropriate for the services to be performed. The firms shall individually identify and calibrate each item of such equipment to a recognized national or international standard.

B. Periodical Surveys for Installations

1. General

1.1 The periodical surveys listed in the following are to be conducted for the structure, machinery including electrical installations as well as special equipment and installations included in the Classification of the installation.

The conditions for the maintenance of type and/or service Notations are to be checked for compliance at each periodical survey; the type and/or service Notation will be suspended and/or withdrawn in accordance with the applicable Rules given in Section 1, F.5., if the relevant rules are not complied with.

If for some obvious reason, e.g. a temporary out-of-service condition of certain equipment, parts included in the Classification cannot be surveyed, this will be noted in the Survey Statement/Certificate.

1.2 Where statutory regulations are applicable which impose inspection intervals deviating from the Class related intervals, where possible, the intervals will be harmonized in the individual case to reduce the number of single surveys.

1.3 In principle, elements covered by the Classification and submitted to a Class renewal survey on a date different from the date of the periodical Class renewal survey of the installation, they are to be re-examined p years after the previous survey.

1.4 An inspection schedule agreed upon between Owner/Operator and GL will be set up for the installation, in accordance with the indications described in this Section and adapted to the individual service conditions, see also Section 4.

1.5 When completed, the individual survey will be noted in the Class Certificate, including any necessary observations.

1.6 For installations special diving devices, vehicles or diver assist systems have to be used, which may be specially adapted to the configuration and
conditions of the individual structure. The suitability of such devices and systems and their deployment within the inspection scheme are subject to approval and will be reviewed in the course of inspections carried out and experience gained.

1.7 The general procedure of survey consists in:

- an overall examination of the parts covered by the rule requirements
- checking of selected items covered by the rule requirements at random
- attending tests and trials, where applicable and deemed necessary by the Surveyor

1.8 When a survey results in the identification of significant corrosion, structural defects or damage to structure, machinery and/or any piece of its equipment which, in the opinion of the Surveyor affect the Class of the installation, remedial measures are to be implemented before the installation continues in service.

1.9 GL’s survey requirements cannot be considered as a substitute for specification and acceptance of repairs and maintenance, which remain the responsibility of the Owner.

1.10 Survey planning and record keeping

1.10.1 A specific Survey Program for Class renewal surveys is to be prepared in advance of the Class renewal survey by the Owner in cooperation with GL. The Survey Program shall be in written format.

1.10.2 For underwater inspection, plans and procedures 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 structure cleaning, non-destructive testing locations, including NDT methods, nomenclature, and for the recording of any damage or deterioration found. Submitted data, after review by GL, will be subject to revision if found to be necessary in light of experience.

2. Annual surveys

2.1 Due dates

Annual surveys are to be held within 3 months before or after each anniversary date from the date of the initial Class survey or from the date credited for the last Class renewal survey.

More extensive regulations of the country, where the fixed offshore installation is registered, are to be observed.

2.2 Scope

2.2.1 General

The survey consists of an examination for the purpose of ensuring, as far as practicable, that the structure, the machinery including electrical installations and equipment are maintained in a satisfactory condition.

2.2.2 Structure and equipment

2.2.2.1 The annual survey will generally cover visual examination of all important structural elements readily accessible, with regard to deformations, cracks, corrosion, etc. Where a special inspection plan has been prepared, the corresponding indications have to be observed, e.g. for critical areas with stress concentrations, locations with previous repairs, etc.

2.2.2.2 The type, location and extent of corrosion control, including coatings, cathodic protection systems, etc., as well its effectiveness and repairs or renewals shall be reported at each survey, see also Chapter 4, Section 6.

2.2.3 Steel structures

2.2.3.1 The structure within the splash zone shall be inspected visually with regard to corrosion, marine growth and damages, e.g. from collisions. Where damages are found which could extend further downwards, diver inspections may be called for.

2.2.3.2 In areas where scour is supposed to occur, adequate control may be required on a yearly basis or at closer intervals, especially for gravity type structures.

2.2.3.3 The exposed parts of the main structure, deck, deck house and structures attached to the deck, derrick substructure including supporting structure, accessible internal spaces and the applicable parts described in this Section are to be generally examined and placed in satisfactory condition as found necessary.

2.2.3.4 Jackets, diagonal and horizontal braces together with any other parts of the upper supporting structure as accessible above the waterline are to be checked.

Note

At the 1st annual survey after construction, the structures may be subject to examination of major structural components including non-destructive testing, as deemed necessary by GL. If GL deems such survey to be necessary, the extent should be agreed to by GL and the Owner or Operator prior to commencement of the survey and incorporated in the survey schedule.

2.2.3.5 The GL Surveyor is to be satisfied that no material alterations have been made to the installation, its structural arrangements, superstructure, fittings and closing appliances.
2.2.3.6 The scope for thickness measurements is to be defined in the survey schedule/special inspection plan, compare G.1. For inadmissible corrosion, see 1.8.

2.2.4 Concrete structures

The concrete surfaces shall be inspected for cracks, abrasion, spalling and any signs of corrosion of the steel reinforcement and embedment, particularly in the splash zone, in ice conditions and where repairs have been carried out previously. Surface has to be cleaned where necessary. Regarding foundations/scouring, see 2.2.3.2.

Note:

See 2.2.3.4

2.2.5 Drilling installations

The main 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 and the back up structure in way of structural connecting members has to be checked.

2.2.6 Machinery

2.2.6.1 A visual examination is to be made of all spaces containing machinery, boilers, pressure vessels, electrical installations, etc. essential for operation of the installation, especially with regard to fire and explosion hazards.

Existing safety plans are to be checked and functioning of safety and alarm devices and of the ventilation system to be verified as far as practicable.

Special equipment such as cranes, life-saving and drilling equipment are to surveyed according to instructions issued in each individual case, if included in the Classification procedure.

2.2.6.2 All installations

In addition a general examination of hazardous areas, remote shutdown arrangements, piping systems, etc. is to be made.

2.2.6.3 Special features for offshore drilling installations

Offshore drilling installations may have special items of machinery and electrical equipment not found on conventional ships. The items mentioned in D.2.6 are to be examined in an analogous manner and reported upon at all Class intermediate surveys.

C. Intermediate Surveys

1. Survey period

1.1 Due dates

An intermediate survey, if requested, is due at half the nominal time interval between two Class Renewal Surveys, i.e. every \( \frac{p}{2} \) years, and may be performed either at the second or third annual survey. Additional items to the annual survey may be performed either at or between the second or third annual survey.

2. Scope

2.1 General

Intermediate surveys are generally to be performed to the extent of annual surveys including any additional items, such as related to a survey inspection programme, if any.

2.2 Special features for offshore drilling installations

Offshore drilling installations may have special items of machinery and electrical equipment not found on conventional ships. The items mentioned in D.2.6 are to be examined in an analogous manner and reported upon at all Class intermediate surveys.

D. Class Renewal Surveys

1. Survey period

1.1 Due dates

Class renewal surveys, also called special surveys are to be carried out at the intervals \( p \) indicated by the Character of Classification.

A Class renewal survey may be carried out in several parts. The survey may be commenced at the last annual survey during the Class period and must have been completed by the end of the Class period. The total survey period of the Class renewal survey must not exceed 15 months.

Regarding underwater survey, see E.

The new period of Class will commence:

- the day after the day the previous Class expires, provided that the Class renewal survey has been completed within the 3 months preceding that date. This applies also to a granted extension of Class.

- the day on which the Class renewal survey has been completed, provided that the Class renewal survey has been completed more than 3 months before expiry of the previous Class.
1.2 Class renewals for hull are numbered in the sequence I, II, III, etc. Regarding their scope, see 2.

1.3 The Class renewal surveys may be performed in various alternative survey modes, e.g.:
- Partial Class Renewal Survey System
- Continuous Class Renewal Survey System
- Planned Maintenance Survey System
- Condition Monitoring Survey System

For details, see GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 3, B.1.3.

2. Scope

2.1 General

2.1.1 The Class renewal surveys shall include, in addition to the annual survey, intermediate survey and the underwater inspection, the following examinations, tests and checks of sufficient extent to ensure that structure, equipment and machinery are in satisfactory condition and that the installation is fit for its intended purpose for the period of Class to be assigned subject to proper maintenance and operation and the periodical surveys carried out at the assigned due dates.

2.1.2 Special requirements for Class Renewal of installations of unusual design, in out of operation status or in unusual circumstances will be determined on individual basis in a survey inspection programme.

2.1.3 Class extension surveys

Upon request of the Owner and in exceptional cases, extension of the Class period may be granted by GL. Following surveys of structure and machinery afloat, GL may extend the Class period p by no more than 3 months in total, provided that the surveys show that hull and machinery including electrical installations are in acceptable condition. See also A.2.1.2.

In this case, the last survey in dry-dock, or equivalent, must not date back more than 5 years, counting from the date of the respective Class renewal survey.

2.2 Structure and equipment

2.2.1 Class Renewal I

Class Renewal I will have to be performed at the end of the first Class period p.

2.2.1.1 All installations

One or more of the following crack detection test methods may be required if deemed necessary by the Surveyor:
- radiography test (X or gamma rays)
- ultrasonic test
- magnetic particle test
- dye penetrant test, etc.

If deemed necessary by the Surveyor, defective cement, asphalt covering or other coating, is to be removed. The steel work is to be examined before painting or before the cement or other coverings are renewed.

2.2.1.2 Structures

In addition to the annual survey and intermediate survey, a comprehensive survey of the underwater and above water structure is to be carried out covering the following aspects:
- overall condition and integrity
- The structure including tanks, void spaces, helicopter deck and its supporting structure, machinery spaces, and all other internal spaces are to be examined externally and internally for damage, fractures, or excessive wastage. Thickness measurements of plating and framing may be required where wastage is evident or suspected.
- Suspect areas may be required to be tested for tightness, non-destructive tested or thickness gauged.
- 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 wastage.
- All tanks, compartments and free-flooding spaces throughout the installation are to be examined externally and internally for excess wastage or damage.
- 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, or other non-corrosive products may be waived provided that upon a general examination the Surveyor considers their condition to be satisfactory. External thickness measurements 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.
- Structure/plate thickness measurements and non-destructive testing according to an approved inspection plan and/or on-the-spot decision where damages are suspected.
foundations and supporting headers, brackets, and stiffeners for drilling related apparatus, where attached to structure, deck, superstructure or deck house

- effectiveness of the corrosion protection system (potential measurements, condition of anodes etc.)
- marine growth
- condition of foundations (changes in topography/scouring, settlement)

Account may be taken of data recorded by instruments installed to monitor structural and foundation behaviour. Special attention shall be given to areas of stress concentration and of suspected or proven damage, and to areas where repairs have been carried out previously.

Cleaning and/or uncovering of areas selected for close-up inspection and non-destructive testing may be necessary.

2.2.2 Class Renewal II and subsequent ones

The age of the installation is \( p \) to \( 2p \) years for Class renewal II and \( np \) for the subsequent ones. The requirements for the second Class Renewal and the subsequent ones shall be as comprehensive and include at least those of Class Renewal I, with special attention being given to the condition and thickness of material in high corrosion areas. Representative thickness measurements shall be required and are to be specified in advance by GL. Special attention should be paid to splash zones on structure, legs or related structure, and in ballast tanks, pre-load tanks, free flooding spaces, etc., as far as applicable.

Regarding special equipment, see B.2.2.6.1.

Applicable regulations of the Administration are to be complied with.

2.3.2 Electrical installation

The electric equipment including the generators, the motors of the essential auxiliary machinery, all switch gear including their protective and interlocking devices, as well as the cable network are to be examined and tested.

Electrical installations, particularly explosion protected machines and apparatus, which are situated in spaces in which there is danger of inflammable gas or steam air mixtures have to be examined concerning their ex-protection as well as IP-protection.

In addition to the general indications given above, the following is to be observed:

- 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 over fused.
- 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 emergency remote switch-off devices of ventilators, fuel pumps, oil fired equipment and similar equipment are to be tested.

2.3.1 Machinery and equipment

In addition to the annual and intermediate survey, an extended examination of machinery spaces and installations will generally include, as far as applicable:

- close inspection of machinery foundations
- opening/internal inspection of pressure vessels and heat exchangers according to an approved inspection plan
- pressure and operability testing of pipe systems according to an approved inspection plan
- inspection and testing of fire protection installations and fire fighting equipment

2.4 Fire extinguishing and fire alarm systems

The requirements for all installations are defined in the GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 3, C.1.3 and are to be observed, as far as applicable.

2.5 Automation and remote control system

In addition to the requirements of annual surveys the following parts 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 to
ensure the proper performance of all automatic functions, alarms and safety systems

- 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 installations
  control systems for unattended machinery spaces, if any, are subjected to trials to ensure the proper performance of all automatic functions, alarms and safety systems

2.6 Special features for offshore drilling installations

Offshore drilling installations may have many special features of machinery and electrical equipment. The following items are to be specially examined and reported upon at all Class renewal surveys:

2.6.1 Hazardous areas

- enclosed hazardous areas such as those containing open active mud tanks, shale shakers, degasers 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 alarm systems to be proven satisfactory

- electrical motors are to be examined including closed-loop ventilating systems for large DC motors

- automatic power disconnect to motors in case of loss of ventilating air is to be proved satisfactory

2.6.2 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 switches for all electrical equipment including main and emergency generators, except alarm and communication systems and lighting in essential areas such as escape routes and landing platforms, are to be proved satisfactory

2.6.3 Fire fighting equipment and fire alarm systems

A general examination of the fire detection and extinguishing apparatus, is to be made in order that the Surveyor may be satisfied with its efficient state. The following items are to be especially examined:

- fire hoses, nozzles and spanners at each fire station

- servicing of all portable soda-acid and foam extinguishers

- weighing and re-charging as necessary of all dry chemical and CO₂ extinguishers

- fire pumps and piping including operation and capacity

- alarm systems

2.6.4 Piping systems

Piping systems used solely for drilling operations and complying either with the GL requirements or a recognized standard are to be examined, as far as practicable, operationally or hydrostatically tested to working pressure, to the satisfaction of the Surveyor.

2.7 Trials

Upon completion of the surveys for Class Renewal, the Surveyor must be satisfied that the entire machinery installation, including the electrical machinery and equipment, is operable without any restrictions. In case of doubt, this may have to be proved by trials and/or operational tests.

E. Periodical Underwater Surveys

1. Survey period

1.1 Due dates

The outside structure and related items of installations are to be examined two times in any year period between two Class renewal surveys, with an interval not exceeding three years between examinations.

Consideration may be given at the discretion of GL, to any special circumstances justifying an extension of the interval. In such circumstances an extension of examination of the fixed offshore installation’s structure of 3 months can be granted by GL.

1.2 Planning of survey

For plans and procedures for underwater surveys see B.1.10.2.
2. Underwater surveys

2.1 General

2.1.1 The procedures and conditions under which a properly conducted underwater inspection is to be executed are defined in the following.

2.1.2 The diving firm assisting in underwater surveys must be approved by GL for this purpose. Validity of an approval granted shall depend on the continued qualification for satisfactorily carrying out the work required. The approval shall be renewed after a period not exceeding 5 years.

2.2 Conditions for underwater surveys

2.2.1 Thickness measurements and non-destructive testing

Underwater internal thickness measurements 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. Plans and procedures for underwater surveys see B.1.10.2.

2.2.2 Underwater conditions

The areas to be surveyed shall be sufficiently clean and the seawater clear and calm enough to permit meaningful examination and photography, if necessary, by the diver. The structures below the waterline must be free from fouling and overall or spot cleaning may be required.

2.2.3 Physical features

The following physical features shall be incorporated into the design in order to facilitate the underwater inspection. When verified they shall be noted in the Classification Certificate for reference at subsequent surveys.

2.2.3.1 Sea suction

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

2.2.3.2 Sea valves

For the underwater survey associated with the Class renewal survey, means must be provided to examine any sea valve.

2.3 Procedures

2.3.1 Exposed areas

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

2.3.2 Underwater areas

Underwater areas are to be surveyed and/or relevant maintenance work is to be carried out with assistance by a diver of an approved firm whose performance is controlled by a Surveyor, using an underwater camera with monitor, communication and recording systems. The underwater pictures on the surface monitor screen must offer reliable technical information such as to enable the Surveyor to judge the parts and/or the areas surveyed. If applicable, the effectiveness of the corrosion protection system (potential measurements, conditions of anodes, etc.), the marine growth and the condition of foundations (changes in topography/scouring, settlement) are to be inspected.

2.3.3 Damage areas

Damage areas shall be photographed. Internal examination, measurements, marking and thickness measurements of such locations may be necessary as determined by the attending Surveyor. Means shall be provided for location, orienting and identifying underwater surfaces in photographs or on video tapes. Documentation suited for reproduction (video tape with sound) shall be made available to GL.

3. Seawater gravity spaces

A special survey program has to be agreed with GL, if applicable, depending on size, configuration and accessibility of the internal structure.

F. Periodical Surveys of Individual Machinery Items

1. Due dates

The periodical surveys of individual machinery items or installations listed in the following are to be carried out in addition to those prescribed for the Class renewal surveys for maintenance of Class.

The requirements regarding the due dates are defined in the GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 3, B.1.5, and are to be observed as far as applicable.

2. Scope

The following machinery items are to be surveyed:

– steam boilers
– thermal oil plants
– steam pipes / heating coils
– pressure vessels

The requirements regarding the scope are defined in the GL Rules I – Ship Technology, Part 0 – Classification and Surveys, Section 3, C.1.5 and are to be observed as far as applicable.
G. Thickness Measurements and Corrosion Tolerances

1. General

1.1 The thickness of structural elements is checked by measurements, in order to assess whether or not the values stipulated in GL Rules are observed, taking into account the admissible tolerances. Unless severe corrosion has occurred owing to particular service conditions, thickness measurements will not be required until Class Renewal II, see D.2.2.2.

1.2 Thickness measurements shall be carried out in accordance with recognized methods, by authorized personnel or companies, see 2. Rust and contamination are to be removed from the components to be examined. The Surveyor is entitled to require check measurements or more detailed measurements to be performed in his presence. The thickness measurements on board shall be witnessed by the Surveyor. This requires the Surveyor to be on board while measurements are taken, to the extent necessary to control the process.

The scope of thickness measurement as well as the reporting shall be fixed in a survey planning meeting between the Surveyor(s), representatives of the Owner and the approved thickness measurement operator/firm well in advance of measurements and prior to commencing the survey.

Thickness measurements of structures in areas where close-up surveys are required shall be carried out simultaneously with the close-up surveys.

2. Authorization

2.1 The personnel or the company entrusted with thickness measurements, as well as the procedure for documentation must be approved by GL for this purpose.

2.2 Validity of an approval granted will depend on the continued qualification. The approval will have to be renewed after a period not exceeding 3 years.

3. Scope of measurements

The scope of thickness measurements as well as the reporting depends upon the particular installation and shall be documented by GL Head Office in advance of measurements and prior to commencing the survey.

H. Non-periodical Surveys

1. Damage survey

It is the responsibility of the Owner/Operator of the installation to report to GL without delay any suffered damage, defect or breakdown, which could invalidate the conditions for which a Classification has been assigned, or if damage may be assumed to have occurred as a consequence of an average or other unusual event, so that it may be examined at the earliest opportunity by the GL Surveyors. All repairs found necessary by the Surveyor shall be carried out to his satisfaction.

2. Repairs

2.1 Where repairs to main structure, legs, columns or other structures, machinery or equipment, which affect or may affect Classification, are planned in advance, a complete repair procedure including the extent of the proposed repair and the need of the Surveyors attendance shall be submitted to and agreed upon by GL reasonably in advance. Failure to notify to GL, in advance of the repairs, may result in suspension of the 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 on site.

2.2 The requirements of 2.1 are not intended to include maintenance and overhaul to structures, machinery and equipment in accordance with recommended manufacturers procedures and established marine practice and which do not require GL approval. However, any repair as a result of such maintenance and overhauls which affects or may affect Classification is to be noted in the log of the installation and submitted to the Surveyor.

2.3 Surveys conducted in the course of repairs are to be based on the latest experience and instructions by GL. In exceptional cases advice is to be obtained from the concerned Head Office departments, in particular where doubts exist as to the cause of damage.

2.4 For older installations, in the case of repairs and/or replacement of parts subject to Classification, as a matter of principle, the Construction Rules in force during their period of construction continue to be applicable.

This does not apply in the case of modifications required to the structure in the light of new knowledge gained from damage analyses, with a view to avoiding recurrence of similar damages.

2.5 Regarding the materials employed and Certificates required, the requirements for new constructions are applicable, see 7.2.

2.6 Regarding damages or excessive wastage beyond allowable limits that affect the Class of the installation, see D.2.2.1.1.

3. Reactivation surveys

In the case of installations which have been out of service for an extended period, the requirements for reactivation surveys will be specially considered in each case with due regard given to the status of surveys at the time of commencement of the out of operation period, the length of period and conditions under which the installation has been maintained during that period.
4. **Conversion or alteration surveys**

No conversions or alterations which may affect Classification shall be made to structure and machinery of a classed installation unless plans of proposed alterations are submitted and approved by GL before the work of alterations is commenced. Such work shall be carried out in accordance with approved plans and tested on completion as required by the Rules and to the satisfaction of the Surveyor. A new or amended Class designation will be assigned, where necessary.

5. **Extraordinary surveys**

GL reserve the right to require extraordinary surveys to be held independently of any regular surveys. Such surveys may become necessary for examining the technical condition of an installation and are understood to form a part of GL’s Quality Assurance System.

6. **Survey for towage**

In compliance with the provisions of the General Conditions, a Certificate of towage over sea may be issued upon satisfactory survey, the scope of which is fixed in each particular case by GL according to the towing over sea.

7. **Welding and replacement of materials**

7.1 Welding of steels, including higher strength hull structural steel, is to be to the satisfaction of GL.

7.2 Welding or other fabrication performed on steels of special characteristics or repairs or renewals of such steel or in areas adjacent to such steel shall be accomplished with procedures approved by GL considering the special materials involved. Substitution of steels differing from those originally installed shall not be made without approval by GL.
Section 6

Certification

A. Certification and Objectives

1. The main objective of GL’s Offshore Certification Services is the written confirmation and verification of compliance with the agreed specifications and applicable regulations. In order to perform these services GL operates a world wide organisation employing qualified staff working according to GL’s internal quality system which is kept updated and adequate to satisfy the client’s needs.

2. The Certification Service is understood as the control procedure and attestation by GL that the design, and/or construction and fabrication and/or installation, and/or testing of a mobile offshore unit or fixed offshore installation and/or components thereof, is in conformity with recognized specifications and regulations or an appropriate safety code agreed between the Operator/Owner and GL in the Certification Service contract. The Certification procedure may be adjusted to the needs of an actual project. Extent and format of the Certification may also depend on the request of an Administration.

Insofar as it is necessary to identify materials or components during the manufacturing process or possibly also after commissioning, e.g. because of special properties of the material, a permanent mark is to be made by means of a stamp.

The construction supervision, survey and/or final inspection of materials, parts supplied or installation components, corresponding to the relevant specifications and GL rules, shall be attested by the GL Surveyor/Inspector, concerned on special forms, or informally, as agreed in the individual case.

3. GL will not be able to successfully negotiate a contract for Certification Services, if the specifications or regulations or codes proposed to GL are in contradiction to GL’s professional understanding.

4. The Certification Services shall be confirmed in writing by issuing the different types of Certification Certificates as it is defined in this Section.

5. The Certification procedures shall be completely independent from GL Classification procedures of mobile offshore units or fixed offshore installations as it is described in Sections 1 to 5.

B. Certification Procedures for New Constructions

1. General

1.1 Sequential steps for the Certification Services

The Certification Services of units or installations may be carried out for new constructions in the sequential steps as it is indicated in Fig. 6.1. It may be requested and needed that only one or more of these indicated sequential steps are subject to the contract for a Certification Service.

1.2 Responsibility

The Certification Service shall be carried out by GL Head Office and/or GL Surveyor/Inspector, as it is described at each type of Certificate. The Surveyor/Inspector may be delegated from the Head Office or from the local GL representations.

1.3 Certificate of Compliance

As an alternative to the Certification procedures described in the following, a Certificate of Compliance (CoCom) may be issued on special request of the client for any part or for the complete unit or installation. In this Certificate scope and standard of compliance shall be defined case by case.

1.4 National Administrations

Extent and format of the Certification Service may also depend on the requests of national Administrations.

2. Certificates for structures, jackets, decks, etc.

The general lay-out of these Certificates is indicated at the right column of Fig. 6.1.

2.1 Design Certificates

The Certification of the design shall be documented by issuing the following Certificates by GL Head Office:

- Basic Design Certificate (CoBD)
- Detail Design Certificate (CoDD)
- Design Certificate (CoD), which shall cover both basic and detailed design

These Certificates shall consist of a cover page plus a list of approved design documents including their review/approval status and the comments of GL Head Office.
### 2.2 Material or Equipment Certificates

The material and equipment at the vendors/contractors shall be certified by the GL Surveyor/Inspector issuing:

- Material Certificates (CoM)
- Equipment Certificates (CoE)

These Certificates for materials (e.g. GL Material Certificate shall be in accordance with GL Rules II – Materials and Welding, Part 1 – Metallic Materials, Chapter 1 – Principles and Test Procedures – Section 1, H.). Machinery equipment, e.g. for valves, pressure vessels, etc., which shall be manufactured in several parts at vendor workshops, etc., after the inspection shall be summarized in a data base for the actual project.

### 2.3 Fabrication Certificates

Upon completion, the GL Surveyor/Inspector on site shall issue the following Certificates after successful manufacture of parts of the installation or unit, e.g.:

- Fabrication Certificate (CoFab), Jacket, which includes appendages such as boat fenders, etc.

- Fabrication Certificate, Piles, which is understood one per jacket

- Fabrication Certificate, Topside Structure including deck, module support frame(s), framework of separate modules
2.4 Installation Certificate

After successful installation offshore, the GL Surveyor/Inspector, shall issue an Offshore Installation Certificate (CoI), which covers piling, welding, no damages sustained during installation, etc.

For each platform as well as for connecting bridges of a complex installation a Certificate may be also issued.

2.5 Certificate of Structure

The Certificate of Structure (CoSt) shall be issued by GL Head Office if all relevant Certificates according to 2.1 to 2.4 are already issued, but it shall cover the structures only. The industrial topside equipment of the Structure shall be certified as it is described in 3.

3. Certificates of topside equipment

The general lay-out of these Certificates may be observed at the left column of Fig. 6.1.

3.1 Design Certificates

Similar Certificates as defined in 2.1 shall be issued.

3.2 Material Certificate

Similar Certificate as defined in 2.2 shall be issued.

3.3 Equipment Certificate

Similar Certificate as defined in 2.2 shall be issued.

3.4 System Certificate

For the different systems of the topside equipment the GL Surveyor/Inspector shall issue e.g. the following Certificates (CoSys):

- Certificate of Fire Fighting System
- Certificate of Emergency Power Supply and Emergency Lighting
- etc.

3.5 Hook-up Certificate

The Hook-up Certificate (CoHu) shall be issued by GL Head Office and covers all topside equipment including the following Completion Certificates:

- Mechanical Completion Certificate
- Testing Certificate
- Pre-commissioning Certificate

These Certificates may be issued by GL Surveyor/Inspector on client’s request.

3.6 Safe operation Certificate

The Certificate of Safe Operation (CoSOp) shall be issued by GL Head Office if all relevant Certificates according to 3.1 to 3.5 are already issued, but it shall cover only the topside equipment. The structure of the unit or installation shall be certified as it is described in 2.

4. Certificate of Fitness

A Certificate of Fitness (CoF) shall be issued by GL Head Office if the

- Certificate of Structure (CoSt) according to 2.5 and
- Certificate of Safe Operation (CoSOp) according to 3.6

have already been issued.

A CoF may be issued for a single platform or for a complex combination of platforms forming a complete installation, e.g.:

- Certificate of Fitness “Offshore Installation…”

and it may be correlated with a statement of limitations, a statement of exceptions and a statement of inspections, if applicable.

C. Modifications to Existing Offshore Units or Installations

1. Letter of Non-Objection to Modifications

GL Head Office shall issue on request of the Owner/Operator a Letter of Non-Objection to Modifications (LNOM) which shall indicate that from the safety point of view, the modifications planned to an existing offshore unit or installation, as defined in the supporting documentation shall not adversely effect the use of the offshore unit or installation for its intended purpose at the specified location.

2. Supporting documents

The letter as defined in 1. shall be supported by the following supporting documents:

- list of relevant drawings and documents
- Design Certificate according to B.2.1
- Material/Equipment Certificates according to B.2.2
- Inspection reports from GL Surveyor/Inspector on site