

Polski Rejestr Statków

RULES FOR THE CLASSIFICATION AND CONSTRUCTION OF NAVAL SHIPS

PART I CLASSIFICATION REGULATIONS

2008



GDAŃSK

RULES FOR THE CLASSIFICATION AND CONSTRUCTION OF NAVAL SHIPS prepared and edited by Polski Rejestr Statków S.A., hereinafter referred to as PRS, consist of the following Parts:

- Part I – Classification Regulations
- Part II – Hull
- Part III – Hull Equipment
- Part IV – Stability and Subdivision
- Part V – Fire Protection
- Part VI – Machinery Installations and Refrigerating Plants
- Part VII – Machinery, Boilers and Pressure Vessels
- Part VIII – Electrical Installations and Control Systems
- Part X – Statutory Equipment

With regard to materials and welding, the requirements of *Part IX – Materials and Welding of the Rules for the Classification and Construction of Sea-going Ships*, apply.

Rules for the Classification and Construction of Naval Ships – 2008 were considered and accepted by the PRS Technical Committee on 9 May 2008.

Part I – Classification Regulations – 2008 was approved by the PRS Board on 24 June 2008 and enters into force on 1 August 2008.

From the entry into force, the requirements of *Part I – Classification Regulations* apply to:

- new naval ships, the building contract for which will be signed on or after 1 August 2008 – within the full scope,
- existing naval ships – from the nearest classification survey.

The requirements of *Part I – Classification Regulations* are extended by the below-listed PRS Publications:

- Publication No. 2/P – Alternative Survey Arrangements for Machinery.
- Publication No. 14/P – Principles of Approval of Computer Programs.
- Publication No. 47/P – Requirements for Safe Entry to Confined Spaces.
- Publication No. 51/P – Procedural Requirements for Service Suppliers.
- Publication No. 54/P – Alternative Hull Survey Arrangements.

© Copyright by Polski Rejestr Statków S.A., 2008

CONTENTS

	page
0 Structure and Scope of the PRS Rules	7
1 General	8
1.1 Scope of Application	8
1.2 Definitions	8
2 Scope of Survey	14
3 Class of a Ship	15
3.1 General	15
3.2 Period of Ship's Class Validity	15
3.3 Main Symbol of Ship Class	15
3.3.1 Main Symbol of Class of a Ship Built under the Survey of PRS	15
3.3.2 Main Symbol of Class of a Ship Built under the Survey of another Classification Society	16
3.3.3 Main Symbol of Class of a Ship Built without the Survey of any Classification Society	16
3.4 Additional Marks in the Symbol of Class	16
3.4.1 General	16
3.4.2 Additional Marks Indicating Ship Types	17
3.4.3 Additional Marks Indicating Limitations Relevant to the Ship Technical Condition and its Operational Ability	18
3.4.4 Additional Marks Indicating Specific Ship's Structure or Adaptation Features	19
3.4.5 Additional Marks Indicating the Ship Specialized Machinery, Electrical and Refrigerating Equipment	22
3.4.6 Additional Marks Indicating Alternative Survey Arrangements	24
3.4.7 Additional Marks Indicating Adaptation of Ship to the Requirements of International Conventions, Codes and Resolutions	25
3.5 Additional Descriptive Information	27
4 Assignment of Class to a Ship	28
4.1 General	28
4.2 Ship Built under PRS' Survey	28
4.2.1 Conditions of Class Assignment	28
4.2.2 Scope of Technical Documentation	28
4.2.3 Scope of Initial Survey	29
4.3 Ship with Valid Class Assigned by another Classification Society	29
4.3.1 Conditions of Class Assignment	29
4.3.2 Scope of Technical Documentation	30
4.3.3 Scope of Initial Survey	31

4.4	Ship Not Classed Before	32
4.4.1	Conditions of PRS Class Assignment	32
4.4.2	Scope of Technical Documentation	32
4.4.3	Scope of Initial Survey	33
4.5	Ship with PRS or another Classification Society's Class Withdrawn	33
5	Maintenance of Ship's Class – Intervals between Surveys and Surveys Scope	34
5.1	General	34
5.2	Intervals between Periodical Surveys	37
5.2.1	Annual Survey	37
5.2.2	Intermediate Survey	37
5.2.3	Class Renewal Survey	37
5.2.4	Bottom Survey of Hull	37
5.2.5	Survey of Propeller Shafts	38
5.2.6	Survey of Propellers	38
5.2.7	Survey of Boilers	38
5.2.8	Survey of Cargo Stowage and Lashing Equipment	38
5.2.9	Survey of Statutory Equipment	38
5.3	Scope of Annual Surveys	38
5.3.1	Hull and Hull Equipment Annual Survey	38
5.3.2	Annual Survey of Machinery, Electrical Installations and Refrigerating Plant	40
5.3.3	Annual Survey of Statutory Equipment	44
5.4	Scope of Intermediate Surveys	44
5.4.1	Intermediate Survey of Hull and Hull Equipment	44
5.4.2	Intermediate Survey of Machinery, Electrical Installations and Refrigerating Plant	45
5.4.3	Intermediate Survey of Statutory Equipment	45
5.5	Scope of Class Renewal Surveys	45
5.5.1	Hull Class Renewal Survey No. 1 – Ships under 6 Years Old	45
5.5.2	Hull Class Renewal Survey No. 2 – Ships between 6 and 12 Years Old	47
5.5.3	Hull Class Renewal Survey No. 3 – Ships between 12 and 18 Years Old	47
5.5.4	Hull Class Renewal Survey No. 4 and the Subsequent Surveys – Ships over 18 Years Old	48
5.5.5	Class Renewal Survey of Machinery, Electrical Installations and Refrigerating Plant	48
5.6	Bottom Periodical Surveys	51
5.6.1	The Ship's Bottom Periodical Survey in Dry Dock	51
5.6.2	Thickness Measurements of the Bottom Shell Plating	52
5.6.3	In-water Bottom Survey by Diver	52
5.7	Periodical Surveys of Propeller Shaft and Propellers	53
5.7.1	General	53
5.7.2	Complete Survey of Propeller Shaft	53

5.7.3	Modified Survey of Propeller Shaft	54
5.7.4	Survey of Propellers	55
5.8	Periodical Surveys of Boilers	55
5.9	Continuous Surveys and other Alternative Survey Systems	57
5.10	Renewal Survey of Statutory Equipment	57
5.11	Periodical Surveys of Cargo Stowage and Lashing Equipment	57
5.12	Occasional Surveys	58
5.12.1	General	58
5.12.2	Survey After Damage	58
5.13	Audits	59
6	Suspension of Ship's Class	60
6.1	Reasons for Ship's Class Suspension	60
6.1.1	Damage to a Ship	60
6.1.2	Transgression of Service Conditions Specified in the Certificate of Class	60
6.1.3	Suspension of Class in the Case of Overdue Periodical Surveys	60
6.1.4	Suspension of Class in the Case of Overdue Recommendations	61
6.2	Dual Classed Ships	61
6.3	Notification to the Navy Authority	62
6.4	Postponement of Class Validity	62
7	Withdrawal of Ship's Class and Withdrawal the Ship from PRS Register	63
7.1	Reasons for Ship's Class Withdrawal	63
7.2	Withdrawal of Ship from PRS Register	63
7.3	Notification to the Navy Authority	63
8	Lay-up and Recommission of a Ship	64
Appendix 1	– Explanation of Selected Abbreviations Associated with Additional Marks in the Symbol of Class	65

0 STRUCTURE AND SCOPE OF THE PRS RULES

0.1 Regulations relating to the scope of PRS' survey activity, PRS' liability, the survey procedures, the procedure of technical documentation approval, as well as kind of the issued documents are given in, separately published by PRS, *Supervision Activity Regulations*.

0.2 *Rules for the Classification and Construction of Naval Ships*, hereinafter referred to as the *Rules*, consist of the following Parts:

- Part I – Classification Regulations,
- Part II – Hull,
- Part III – Hull Equipment,
- Part IV – Stability and Subdivision,
- Part V – Fire Protection,
- Part VI – Machinery Installations and Refrigerating Plants,
- Part VII – Machinery, Boilers and Pressure Vessels,
- Part VIII – Electrical Installations and Control Systems,
- Part X – Statutory Equipment.

With regard to materials and welding, the requirements of *Part IX – Materials and Welding* of the *Rules for the Classification and Construction of Sea-going Ships*, apply.

0.3 Additional and supplementary requirements are given in, separately published, Publications P (Rules), referred to in particular Parts of the *Rules*.

1 GENERAL

1.1 Scope of Application

1.1.1 *Rules for the Classification and Construction of Naval Ships* apply to naval surface ships, hereinafter referred to as ships, with a displacement of 10 metric tons and above, operating in non-Arctic seas, irrespective of their navigation area.

1.1.2 The *Rules* contain requirements for the following types of ships:

- .1 frigate,
- .2 corvette,
- .3 minelayer,
- .4 mine destroyer,
- .5 minesweeper,
- .6 patrol ship,
- .7 motor boat,
- .8 landing craft,
- .9 auxiliary ship (command ship, reconnaissance ship, hydrographic ship, supply ship),
- .10 coastal patrol boat.

1.1.3 To naval surface ships intended to provide support to warship, such as transport ships, hydrographic ships, naval stations and other ships, the *Rules for the Classification and Construction of Sea-going Ships*, the *Rules for the Classification and Construction of Small Sea-going Ships*, the *Rules for the Classification and Construction of Motor Boats*, the *Rules for the Classification and Construction of Sea-going Yachts*, apply.

1.1.4 The present Part of the *Rules* applies both to new and existing ships. Wherever in the *Rules* the ship's age is referred to, it is determined from the date of build.

1.1.5 The requirements concerning high-speed craft are given in the *International Code of Safety for High Speed Craft (HSC Code)*.

1.1.6 The requirements concerning wings-in-ground craft are given in the *Interim Guidelines for wings-in-ground (WIG) craft (Res.MSC/Circ.1054)*.

1.2 Definitions

In the present Part, the following definitions have been adopted and they are also applicable to other Parts of the *Rules*:

- .1 **Certification of infrastructure** – proceeding aimed at confirmation of compliance of the specified ship equipment with national standards, international standards or STANAGs (e.g. ship aviation facilities). Certification may be applied also to service system for certified equipment.

- .2 **Classification cycle** – a cyclical period starting from the date of completion of the Initial Survey for Assignment of Class carried out after the ship's construction completion or from the date of Class Renewal Survey completion, equal to class validity period (in general 6 years) and covering all due Periodical Surveys.
- .3 **Date of build** – the date of completing the Initial Survey for Assignment of Class to a new ship, which shall be the basis for Periodical Surveys requirements. Where there is a substantial delay between completion of construction survey process and the ship commencing service, the date of commissioning may be also specified in the *Certificate of Class*. In the case of the ship's modification, the date of build is to remain assigned to the ship. In the case of a complete replacement or addition of a major portion of the ship, e.g. forward section, after section or main cargo section, for each such portion, the date of modification, which shall be the basis for Periodical Surveys requirements, is to be indicated.
- .4 **Length of ship (length L)** – 96% of the total length on a waterline at 85% of the moulded depth, measured from the base plane, or the length from the foreside of the stem to the axis of the rudderstock on that waterline, if that be greater. In ships designed with a rake of keel, the waterline on which this length is measured is to be parallel to the design waterline.
- .5 **High speed craft** – a craft capable of a maximum speed, in m/s, equal to or exceeding $3.7 V^{0.1667}$, where V = displacement corresponding to the design waterline, [m³].
- .6 **Class of a ship according to NO-01-A002:1999 and/or STANAG 1166** – the ship's class is a term used by national navies, defining the main features of the ship, such as the ship's size and purpose. This definition is not applicable to the present *Rules*.
- .7 **Class of a ship according to PRS** – compliance of the ship's structure, workmanship and condition (the condition of hull, machinery, installations, equipment) with the relevant requirements of the present Part of the *Rules*, confirmed by *Certificate of Class*. This definition is applicable to the present *Rules*.
- .8 **Statutory Survey** – a survey performed upon authorization of the Navy aimed at verification of the ship's structure and equipment compliance with the requirements of Conventions, Codes and international agreements, within the scope specified by the Navy.
- .9 **Technical supervision** – a survey of machinery and systems other than those subject to classification, installed on board, carried out to ascertain that the structure complies with the requirements of Conventions, Codes and other requirements specified by the customer.

- .10** **S u b d i v i s i o n** – capability of a ship to maintain sufficient reserve of buoyancy and stability after flooding of a single compartment or a group of adjacent compartments. Only one penetration of the hull and the most adverse combination of flooded compartments, located within the considered single compartment / a group of compartments are to be taken into account in calculations.
- .11** **P r o m p t a n d t h o r o u g h r e p a i r** – a permanent repair completed at the time of survey, therein eliminating the need for imposition of recommendations, to be carried out by a specified date.
- .12** **E x a m i n a t i o n :**
 - **E x t e r n a l e x a m i n a t i o n (g e n e r a l)** – a visual inspection of the hull structure or machinery, without dismantling, to provide a general assessment of their condition and to determine, where necessary, the need and the scope of an additional internal or close-up examination;
 - **I n t e r n a l e x a m i n a t i o n** – a visual examination of structure or machinery in dismantled condition (partially or wholly) or a visual examination of an arrangement (boilers, pressure vessels) from the inside, aimed at the assessment of their condition and determination, where necessary, the scope of measurements and tests;
 - **C l o s e - u p e x a m i n a t i o n** – a thorough visual examination of the hull structure being within the Surveyor’s reach and a possible hammer, magnifying glass, etc. testing.
- .13** **W a r s h i p** – a floating unit being a part of the Navy and flying the Navy ensign.
- .14** **S p e c i a l p e r s o n n e l** – all persons who are not members of the crew but are on board in connection with work and special purpose of the ship, e.g. scientific personnel, the personnel of laboratories, workmen, engineering and administrative staff of floating workshops, students and instructors or persons engaged in sea trials, etc.
- .15** **B a s e p l a n e** – a horizontal plane which crosses amidships the top of a flat keel or the intersection of the inner surface of the plating with the bar keel.
- .16** **A p p r o v e d s e r v i c e s u p p l i e r** – a firm or a person holding a valid PRS’ *Approval Certificate* entitling to perform work, measurements, destructive and non-destructive tests, etc. within the scope and on conditions specified by PRS.
- .17** **P r o t e c t i v e c o a t i n g s** – usually epoxy coating or equivalent. Other coating systems may be considered acceptable as alternatives, provided that they are applied and maintained in compliance with the manufacturer’s specification. The following coatings are distinguished:

-
- **Soft coatings** – coatings which always remain soft and can be damaged by walking, touching, erosion, etc. These coatings are lanolin, vegetable oil and other organic and inorganic substances based products.
 - **Semi-hard coatings** – coatings which, when drying, convert in such a way that they stay flexible and have the ability to prevent corrosion for at least 3 years.
 - **Hard coatings** – coatings, which always remain hard and are usually epoxy coatings or equivalent.
- .18 Operation, strength, tightness tests:**
- **Operation tests** – close-up examinations of machinery or appliance under working conditions, combined with the measurements of essential operation parameters.
 - **Strength tests:**
 - **destructive strength tests** – a load is applied to test samples and increased until the sample is damaged. Parameters of the destructive load are recorded in the test report.
 - **non-destructive strength tests** – a test load, specified by PRS, is applied to the tested object or product. The tested object should not be damaged during testing.
 - **Tightness test** – a pressure of the liquid or gas medium is applied to the tested body. Kind of medium, test procedure and pressure value are to be agreed with PRS' Surveyor.
- .19 Survey** – a set of activities relating to a ship, its machinery, appliances, equipment, etc. realized through review of technical documentation, as well as carrying out appropriate examinations, measurements and tests. Where common system of surveys is carried out, it is to include classification and statutory surveys.
- .20 Transverse section** – a section which includes all longitudinal members, such as plating, longitudinals and girders at the deck, sides, bottom, inner bottom and longitudinal bulkheads. For transversely framed vessels, a transverse section includes adjacent frames with their end connections.
- .21 Representative spaces** – spaces which are expected to reflect the condition of other spaces of similar type and service and with similar corrosion protection systems. When selecting representative spaces, account is to be taken of the service and repair history on board and identifiable critical and/or suspect areas.
- .22 Critical areas of structure** – locations which have been identified from calculations to require monitoring or from the service history of the subject ship, from similar or sister ship (if available), to be sensitive to cracking, buckling or corrosion which would impair the structural integrity of the ship.

-
- .23** **Suspect areas** – locations showing substantial corrosion or considered by the Surveyor to be prone to damage or rapid wastage.
- .24** **Coating condition** – for hard and semi-hard coatings:
- good – condition with only minor spot rusting;
 - fair – condition with local breakdown at edges of stiffeners and weld connections or light rusting over 20% or more of the area under consideration;
 - poor – condition with general breakdown of coating over 20% or more of the area or hard scale at 10% or more of the area under consideration.
- .25** **Symbol of PRS class** – a group of conventional marks and notations, specifying a class of a ship, kind of survey during the ship's building and in service, as well as the ship's structural features and operational limitations, if any. Symbol of class consists of the main symbol of class, as well as additional marks and additional descriptive information.
- .26** **Corrosion protection system** – normally considered either:
- .1** a full hard coating, or
 - .2** a full hard coating supplemented by anodes.
- Other coating systems may be considered acceptable by PRS, provided they are applied and maintained in compliance with the manufacturer's specification.
- .27** **Certificate of Compliance** – a document certifying that the ship and its equipment comply – fully or partially (as specified in the Certificate) – with the requirements of the relevant Convention, Code or international agreement.
- .28** **Grounding** – an unintended contact, by a ship, with the water bed or a navigation obstacle, reported by the Commanding Officer as marine accident.
- .29** **Moulded depth** – the vertical distance measured amidships from the base plane to the top of the uppermost continuous deck beam at side.
- .30** **Survey completion** – a survey is considered completed when all activities, determined in the *Rules*, for the specified survey, have been carried out, the recommended repairs have been made and deficiencies have been rectified as to ensure the safe departure of the ship to sea and its safe operation. Completion of survey is confirmed by a new temporary certificate or an endorsement of a full-term certificate. The date of survey completion is a date of issuing temporary certificate or endorsement of full-term certificate.
- .31** **Crew of a ship** – a group of persons commanding the ship and executing the tasks according to the ship's purpose.

-
- .32** Quality or product configuration management – proceeding in accordance with NATO requirements, published in Quality Assurance Publication (AQAP). This preceding may be performed by an authorised person or services within the scope of the survey or parallel to the survey.
 - .33** Ballast tank – a tank which is being used primarily for water ballast.
 - .34** Substantial corrosion – an extent of corrosion such that assessment of corrosion pattern indicates wastage in excess of 75% of allowable margins, but within acceptable limits.
-

2 SCOPE OF SURVEY

2.1 Classification survey covers the ship's hull and its equipment, the machinery and electrical equipment, as well as refrigerating plants, including their systems and other equipment, referred to in the *Rules*.

2.2 Stability, subdivision, fire protection and damage protection are also subject to classification survey, according to the principles set forth in the *Rules*.

2.3 At the request of the Navy, machinery and systems essential for the ship's safety and environment protection, lifting appliances, crew accommodation spaces, etc. may be covered, fully or partially, by technical supervision on conditions specified in International Conventions, Codes, national and international standards. Such technical supervision is performed under conditions specified in the *Rules*.

2.4 If the symbol of class contains additional marks, the pertinent items of hull, machinery, electrical equipment and refrigerating plants are subject to periodical surveys at the time of classification surveys as specified in the *Rules*.

3 CLASS OF A SHIP

3.1 General

3.1.1 At the Navy's request, PRS may assign a class to a new or an existing ship, as well as to confirm, renew, withdraw or reinstate class of an existing ship classed with PRS.

3.1.2 PRS may suspend or withdraw the ship's class for reasons specified in Chapters 6 and 7, respectively.

3.1.3 Class of a ship is confirmed by *Certificate of Class*.

3.1.4 In the *Certificate of Class*, the main symbol of class with additional marks and additional descriptive information is given.

3.1.5 Class of machinery is confirmed by *Machinery Certificate*.

3.2 Period of Ship's Class Validity

3.2.1 Class of a ship is assigned or renewed, in general, for 6 years.

3.2.2 Having regard to the technical condition of the hull, machinery or electrical equipment, PRS may assign a class to a ship for a shorter period or may shorten the class validity, inserting an appropriate additional mark in the symbol of class – see 3.4.3.1.

3.2.3 In well-grounded cases, PRS may extend the ship's class validity.

3.3 Main Symbol of Ship Class

3.3.1 Main Symbol of Class of a Ship Built under the Survey of PRS

3.3.1.1 A new ship built under PRS' survey, upon completion of the Initial Survey for Assignment of Class (construction survey), (see 4.2) is given the following main symbol of class:

* **OKM**

3.3.1.2 The machinery, built under PRS' survey, to which, upon completion of the Initial Survey for Assignment of Class (see 4.2), PRS class has been assigned, is given the following symbol of class:

* **PRM**

3.3.2 Main Symbol of Class of a Ship Built under the Survey of another Classification Society

3.3.2.1 An existing ship, built under the survey of another Classification Society, to which, upon completion of the Initial Survey for Assignment of Class (see 4.3 and 4.5), PRS class has been assigned, is given the following main symbol of class:

OKM

3.3.2.2 The machinery, previously classed by another Classification Society, to which, upon completion of the Initial Survey for Assignment of Class (see 4.3 and 4.5), PRS class has been assigned, is given the following symbol of class:

PRM

3.3.3 Main Symbol of Class of a Ship Built without the Survey of any Classification Society

3.3.3.1 A ship built without the survey of any Classification Society, to which, upon completion of the Initial Survey for Assignment of Class (see 4.4), PRS class has been assigned, is given the following main symbol of class:

(OKM)

3.3.3.2 The machinery, built without the survey of any Classification Society, to which, upon completion of the Initial Survey for Assignment of Class (see 4.4), PRS class has been assigned, is given the following symbol of class:

(PRM)

3.4 Additional Marks in the Symbol of Class

3.4.1 General

3.4.1.1 Additional marks in the symbol of class are assigned directly by PRS or at the Navy's request, upon satisfactory consideration by PRS.

3.4.1.2 Additional marks in the symbol of class indicate:

- .1** ship type,
- .2** limitations relevant to the ship technical condition and its operational ability,
- .3** specific ship's structure or adaptation features,
- .4** specialized machinery, electrical and refrigerating equipment,
- .5** application of alternative survey arrangements,
- .6** ship adaptation to the requirements of Conventions, Codes and international agreements.

3.4.1.3 Additional marks are affixed to the symbol of class upon compliance with the requirements specified in the relevant Parts of the *Rules*.

3.4.1.4 Additional marks in the symbol of class are put after the main symbol of class in order ensuing from 3.4.2 to 3.4.7, e.g.

*** OKM FF I [1] L3 IWS AUT.**

3.4.1.5 PRS may alter or delete the additional mark in the symbol of class in the case of modification of conditions, upon which the mark has been affixed or at the Navy's request.

3.4.1.6 Explanation of the selected abbreviations associated with additional marks is given in Appendix 1.

3.4.2 Additional Marks Indicating Ship Types:

3.4.2.1 A ship which complies with the requirements for the given type, specified in the *Rules*, is assigned one of below-listed marks, affixed to the symbol of class:

3.4.2.1.1 Frigate:

FF

3.4.2.1.2 Corvette:

FS

3.4.2.1.3 Minelayer:

ML

3.4.2.1.4 Mine destroyer:

MH

3.4.2.1.5 Minesweeper:

MS

3.4.2.1.6 Patrol ship:

PG

3.4.2.1.7 Motor boat:

PP

3.4.2.1.8 Landing craft:

LL

3.4.2.1.9 Support ship (e.g. command ship – **AGF**, reconnaissance ship – **AGI**, hydrographic ship – **AGH**, supply ship – **AF**).

3.4.2.1.10 Coastal patrol ship:

PGC

3.4.2.2 PRS may assign to the ship another mark indicating the ship type if considers it technically justified. In such case, the additional requirements are specified by PRS in each particular case.

3.4.3 Additional Marks Indicating Limitations Relevant to the Ship Technical Condition and its Operational Ability

3.4.3.1 Mark of Limited Period of Class Validity

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

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

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

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

3.4.3.2 Restricted Service Marks

If a ship has been built with preferences for the given area of navigation, specified in *Parts: II – Hull, III – Hull Equipment, IV – Stability and Subdivision, V – Fire Protection* and *VI – Machinery Installations and Refrigerating Plants*, as well as *VIII – Electrical Installations and Control Systems* of the *Rules*, marks **I**, **II** or **III** are affixed to the symbol of class to have the following meaning:

- I** – navigation on oceans and open seas up to 200 nautical miles from the port of refuge and with an allowable distance between two ports of refuge up to 400 nautical miles and navigation on enclosed seas;
- II** – navigation on oceans and open seas up to 50 nautical miles from the port of refuge and with an allowable distance between two ports of refuge up to 100 nautical miles and navigation on enclosed seas, within the limits determined for each case and specified in the *Certificate of Class*, e.g. navigation on the Baltic Sea;
- III** – navigation on oceans and the open and enclosed seas up to 20 nautical miles from the coast line, within the limits determined for each case and specified in the *Certificate of Class*, e.g. navigation on the territorial waters of the Republic of Poland.

3.4.3.2.1 For unrestricted service ships, no marks indicating an area of navigation are affixed to the symbol of class.

3.4.4 Additional Marks Indicating Specific Ship's Structure or Adaptation Features

3.4.4.1 Hull Material Mark

3.4.4.1.1 If a ship's hull has been constructed from materials other than normal strength steel complying with the relevant requirements of *Part IX – Materials and Welding*, the following mark is affixed to the symbol of class:

- .1** **SPW**
where the hull is made from higher strength steel
- .2** **ALU**
where the hull is made from aluminium alloys
- .3** **PLA**
where the hull is made from polymer composites.

3.4.4.2 Rational Ship Design Mark

3.4.4.2.1 A ship complying with the relevant requirements of *Part II – Hull* for the rational ship design is assigned the mark:

RSD

affixed to the symbol of class.

3.4.4.3 Subdivision Mark

3.4.4.3.1 A ship is assigned one of the following marks:

[1] or [2] or [3]

affixed to the symbol of class, which indicates that the ship complies with the relevant requirements set forth in *Parts: III – Hull Equipment, IV – Stability and Subdivision* and *VI – Machinery Installations and Refrigerating Plants*.

The figures in brackets indicate the number of compartments after the flooding of which the ship should remain afloat in a satisfactory state of equilibrium.

3.4.4.4 Residual Strength Mark

3.4.4.4.1 A ship complying with the relevant requirements of *Part II – Hull* for residual strength, is assigned the mark:

RS

affixed to the symbol of class.

3.4.4.5 Ice Strengthening Marks (Ice Class)

3.4.4.5.1 If ice strengthening of a ship complies with the relevant requirements contained in *Parts: II – Hull, III – Hull Equipment* and *VI – Machinery Installations and Refrigerating Plants*, the mark:

L1A

which means that the ship is allowed to sail unaided in winter in non-Arctic seas in extremely heavy ice conditions, is affixed to the symbol of class.

3.4.4.5.2 If ice strengthening of a ship complies with the relevant requirements contained in *Parts: II – Hull, III – Hull Equipment* and *VI – Machinery Installations and Refrigerating Plants*, the mark:

L1

which means that the ship is allowed to sail unaided in winter in non-Arctic seas in heavy ice conditions, is affixed to the symbol of class.

3.4.4.5.3 If ice strengthening of a ship complies with the relevant requirements contained in *Parts: II – Hull* and *VI – Machinery Installations and Refrigerating Plants*, the mark:

L2

which means that the ship is allowed to sail unaided in rarefied fine ice pieces of non-Arctic seas in medium ice conditions, is affixed to the symbol of class.

3.4.4.5.4 If ice strengthening of a ship complies with the relevant requirements contained in *Parts: II – Hull* and *VI – Machinery Installations and Refrigerating Plants*, the mark:

L3

which means that the ship is allowed to sail unaided in rarefied fine ice pieces of non-Arctic seas in light ice conditions, is affixed to the symbol of class.

3.4.4.5.5 If a ship is constructed with no ice strengthening, no ice class marks are affixed to the symbol of class.

3.4.4.6 Emergency Response Service Mark

3.4.4.6.1 A ship complying with the appropriate requirements specified in the relevant parts of the *Rules* for emergency response service, is assigned the mark:

ERS

affixed to the symbol of class.

3.4.4.7 Deck Strengthening Mark

3.4.4.7.1 Where the ship's decks strengthened for the carriage of ro-ro cargoes comply with the relevant requirements of *Part II – Hull*, the mark:

SD

is affixed to the symbol of class.

3.4.4.8 Mark of Ship Adaptation for the Carriage of Containers on Deck

3.4.4.8.1 A ship complying with the relevant requirements of *Part III – Hull Equipment* for the carriage of containers on deck, is assigned the mark:

ACC (...)

affixed to the symbol of class.

Design number of twenty foot equivalent units (TEU) is given in brackets.

3.4.4.9 Movable Decks Mark

3.4.4.9.1 Where the ship's movable decks comply with the relevant requirements of *Part III – Hull Equipment*, the mark:

MD

is affixed to the symbol of class.

3.4.4.10 Ramps and Ports Mark

3.4.4.10.1 Where the ship's ramps and ports comply with the relevant requirements of *Part III – Hull Equipment*, the mark:

RAF

is affixed to the symbol of class.

3.4.4.11 Mark of Strengthening in Ships Lying Aground

3.4.4.11.1 A ship complying with the relevant requirements specified in *Part II – Hull* for lying aground, is assigned the mark:

LAL

affixed to the symbol of class.

3.4.4.12 Mark of Strengthening for Mooring at Sea

3.4.4.12.1 A ship complying with the relevant requirements specified in *Part II – Hull* for mooring at sea to another ship, is assigned the mark:

MS

affixed to the symbol of class.

3.4.4.13 Mark of Protection against Corrosion

3.4.4.13.1 A ship complying with the relevant requirements specified in *Part II – Hull* for corrosion additions reduction or omission, is assigned the mark:

PAC

affixed to the symbol of class.

3.4.4.14 Mark of Adaptation to Survey of Underwater Part of Hull by Divers

3.4.4.14.1 A ship complying with the relevant requirements specified in *Parts: II – Hull, III – Hull Equipment and VI – Machinery Installations and Refrigerating Plants*, for the ship adaptation to survey of the underwater part of hull by divers, is assigned the mark:

IWS

affixed to the symbol of class.

3.4.5 Additional Marks Indicating the Ship Specialized Machinery, Electrical and Refrigerating Equipment

3.4.5.1 Mark of Unattended Machinery Space

3.4.5.1.1 If automatic systems and machinery of a ship comply with the relevant requirements of *Part VIII – Electrical Installations and Control Systems* for being capable of unattended operation during at least 8 consecutive hours without direct attendance of the crew, the mark:

AUT

is affixed to the symbol of class.

3.4.5.2 Mark for One Man Bridge Operation

3.4.5.2.1 If the ship's automatic systems comply with the relevant requirements of *Part VIII – Electrical Installations and Control Systems* for one man bridge operation, the mark:

NAV 1

is affixed to the symbol of class.

3.4.5.3 Refrigerating Plant Mark

3.4.5.3.1 If a refrigerating plant complies with the relevant requirements specified in *Part VI – Machinery Installations and Refrigerating Plants*, the mark:

Ch

is affixed to the symbol of class.

3.4.5.4 Mark of Centralized Machinery Operation Control System

3.4.5.4.1 If machinery, electrical installations and automatic systems comply with the relevant requirements specified in *Parts: VI – Machinery Installations and Refrigerating Plants* and *VIII – Electrical Installations and Control Systems* for the centralized machinery operation control system, the mark:

CCM

is affixed to the symbol of class.

3.4.5.5 Dynamic Positioning System Mark

3.4.5.5.1 If a ship complies with the relevant requirements specified in *Parts: VI – Machinery Installations and Refrigerating Plants* and *VIII – Electrical Installations and Control Systems* for dynamic positioning system, the mark:

DP

is affixed to the symbol of class.

3.4.5.6 Mark for Continuous Monitoring of Machinery Technical Condition

3.4.5.6.1 If a ship machinery complies with the relevant requirements specified in *Parts: VI – Machinery Installations and Refrigerating Plants* and *VIII – Electrical Installations and Control Systems* for continuous monitoring of machinery technical condition, the mark:

CMC

is affixed to the symbol of class.

3.4.5.7 Shock Enhancement Mark

3.4.5.7.1 If a ship complies with the relevant requirements specified in *Parts: II – Hull, III – Hull Equipment, VI – Machinery Installations and Refrigerating Plants* and *VIII – Electrical Installations and Control Systems* for shock enhancement, the mark:

SH

is affixed to the symbol of class.

3.4.5.8 Mark of Ship Carrying Vehicles with Petroleum Tanks

3.4.5.8.1 If a ship complies with the relevant requirements specified in *Parts: V – Fire Protection* and *VIII – Electrical Installations and Control Systems* for carrying vehicles with petroleum tanks, the mark:

PET

is affixed to the symbol of class.

3.4.5.9 Demagnetization Mark

3.4.5.9.1 A ship machinery complying with the relevant requirements specified in *Part VI – Machinery Installations and Refrigerating Plants* for demagnetization, is assigned the mark:

DEG

affixed to the symbol of class.

3.4.5.10 Mark of Certified Ship Aviation Facilities

3.4.5.10.1 A ship complying with the relevant requirements for certified ship aviation facilities specified in *the Guidelines for ship aviation facilities certification*, is assigned the mark:

HELO

affixed to the symbol of class.

3.4.5.11 Mark of Protection against Nuclear, Biologic and Chemical Weapons

3.4.5.11.1 A ship complying with the relevant requirements specified in *Part VI – Machinery Installations and Refrigerating Plants* for the protection against nuclear, biologic and chemical weapons, is assigned the mark:

NBC

affixed to the symbol of class.

3.4.5.12 Mark of Diving Systems

3.4.5.12.1 If the diving systems, installed on the ship, comply with the relevant requirements specified in the *Rules for the Classification and Construction of Submersibles*, the mark:

DIV

is affixed to the symbol of class.

3.4.6 Additional Marks Indicating Alternative Survey Arrangements

3.4.6.1 Mark Indicating Hull Continuous Survey

3.4.6.1.1 If the conditions for performing the hull survey in the continuous survey system comply with the relevant requirements specified in *Publication No. 54/P – Alternative Hull Survey Arrangements*, the mark:

CHS

is affixed to the symbol of class.

3.4.6.2 Mark Indicating Consolidated Supervision System of Hull

3.4.6.2.1 If the conditions for performing the hull survey in the consolidated supervision system comply with the relevant requirements specified in *Publication No. 54/P – Alternative Hull Survey Arrangements*, the mark:

CCM

is affixed to the symbol of class.

3.4.6.3 Mark Indicating Continuous Machinery Survey

3.4.6.3.1 If the conditions for performing the machinery, electrical and refrigerating installations survey in the continuous survey system comply with the relevant requirements specified in *Publication No. 2/P – Alternative Survey Arrangements for Machinery*, the mark:

CMS

is affixed to the symbol of class.

3.4.6.4 Mark Indicating Planned Maintenance Scheme for Machinery

3.4.6.4.1 If the conditions for performing the machinery, electrical and refrigerating installations survey in the planned maintenance scheme comply with the relevant requirements contained in *Publication No. 2/P – Alternative Survey Arrangements for Machinery*, the mark:

PMS

is affixed to the symbol of class.

3.4.7 Additional Marks Indicating Adaptation of Ship to the Requirements of International Conventions, Codes and Resolutions

3.4.7.1 Life-Saving Appliances Mark

3.4.7.1.1 A ship complying with the relevant requirements specified in *Part X – Statutory Equipment* and the *International Convention for the Safety of Life at Sea* for life – saving appliances, is assigned the mark:

LSA

is affixed to the symbol of class.

3.4.7.2 Radiotelecommunication Equipment Mark

3.4.7.2.1 A ship complying with the relevant requirements specified in *Part X – Statutory Equipment* and the *International Convention for the Safety of Life at Sea* for radiotelecommunication equipment is assigned the mark:

RAD

is affixed to the symbol of class.

3.4.7.3 Mark of Ship Adaptation to the Carriage of Dangerous Goods

3.4.7.3.1 A ship complying with the relevant requirements specified in the *International Convention for the Safety of Life at Sea* for the carriage of dangerous goods is assigned the mark:

CDG

affixed to the symbol of class.

3.4.7.4 Navigation Equipment Mark

3.4.7.4.1 A ship complying with the relevant requirements specified in *Part X – Statutory Equipment* and the *Convention on the International Regulations for Preventing Collisions at Sea* for navigation equipment is assigned the mark:

NE

affixed to the symbol of class.

3.4.7.5 Mark of Oil Pollution Prevention

3.4.7.5.1 A ship complying with the relevant requirements specified in *Part X – Statutory Equipment* and in *Annex I* to the *International Convention for the Prevention of Pollution from Ships* relating to prevention of pollution by oil is assigned the mark:

MAR-I

affixed to the symbol of class.

3.4.7.6 Mark of Prevention of Pollution by Noxious Liquid Substances

3.4.7.6.1 A ship complying with the relevant requirements specified in *Part X – Statutory Equipment* and in *Annex II* to the *International Convention for the Prevention of Pollution from Ships* relating to prevention of pollution by noxious liquid substances is assigned the mark:

MAR-II

affixed to the symbol of class.

3.4.7.7 Mark of Prevention of Pollution by Sewage from Ships

3.4.7.7.1 A ship complying with the relevant requirements specified in *Part X – Statutory Equipment* and in *Annex IV* to the *International Convention for the Prevention of Pollution from Ships* relating to prevention of pollution by sewage from ships is assigned the mark:

MAR-IV

affixed to the symbol of class.

3.4.7.8 Mark of Prevention of Pollution by Garbage from Ships

3.4.7.8.1 A ship complying with the relevant requirements specified in *Part X – Statutory Equipment* and in *Annex V* to the *International Convention for the Prevention of Pollution from Ships* relating to prevention of pollution by garbage from ships is assigned the mark:

MAR-V

affixed to the symbol of class.

3.4.7.9 Mark of Prevention of Air Pollution from Ships

3.4.7.9.1 A ship complying with the relevant requirements specified in *Part X – Statutory Equipment* and in *Annex VI* to the *International Convention for the Prevention of Pollution from Ships* relating to prevention of air pollution from ships is assigned the mark:

MAR-VI

affixed to the symbol of class.

3.4.7.10 Mark of Ship Tonnage

3.4.7.10.1 If a tonnage of a ship is measured according to the relevant requirements of the *Rules for the Tonnage Measurement of Sea-going Ships* and the *International Convention on Tonnage Measurements of Ships*, the mark:

ITM

is affixed to the symbol of class.

3.4.7.11 Freeboard Mark

3.4.7.11.1 A ship complying with the relevant requirements specified in *Parts: II – Hull, III – Hull Equipment, IV – Stability and Subdivision* and the *International Convention on Load Lines* for freeboard is assigned the mark:

FB

affixed to the symbol of class.

3.4.7.12 Mark of Lifting Appliances

3.4.7.12.1 A ship complying with the relevant requirements specified in *Parts III – Hull Equipment* and the *Statutory Rules for Sea-going Ships, Part VI – Lifting Appliances* for cargo gears and lifting units is assigned the mark:

CG

affixed to the symbol of class.

3.5 Additional Descriptive Information

Other additional requirements connected with the ship's class, conditions and restrictions which are beyond the scope of additional marks requirements are entered in the *Appendix* to the *Certificate of Class/Temporary Certificate of Class*.

4 ASSIGNMENT OF CLASS TO A SHIP

4.1 General

4.1.1 PRS may assign a class to a new ship or to an existing ship. The condition for assigning class to a ship is the Navy's written request (for new buildings it may be the Shipyard's request) for PRS class assignment, submitting the required technical documentation and satisfactory result of the Initial Survey for Assignment of Class.

4.1.2 After completion of the Initial Survey for Assignment of Class, PRS Branch Office issues *Temporary Certificate of Class* to enable the ship to sail. The results of the Initial Survey are subject to the PRS Head Office verification.

4.1.3 Assignment of class is confirmed by the issue of *Certificate of Class* and an appropriate entry made in the PRS Register. Assignment of class means that the ship, in full measure or to a degree considered by PRS acceptable, complies with the relevant requirements of the *Rules*.

4.1.4 Where structural details of a ship to be classed with PRS or its equipment do not comply with the requirements of PRS *Rules* and the Navy presents evidence of the ship's or equipment satisfactory behaviour during the ship hitherto operation, PRS may accept the evidence as technically equivalent.

4.2 Ship Built under PRS' Survey

4.2.1 Conditions of Class Assignment

4.2.1.1 A new ship, built under PRS' survey, may be assigned PRS class after approval of technical documentation within the scope specified in particular Parts of the *Rules*, and after satisfactory completion of the Initial Survey for Assignment of Class (construction survey) covering the following classification activities:

- survey of the manufacture of materials, components, machinery and equipment,
- survey during construction of hull and the main engine,
- survey of installation of machinery, systems and equipment on board,
- survey of dock and sea trials.

PRS *Certificate of Class* validity will start from the date of the Initial Survey completion.

4.2.2 Scope of Technical Documentation

4.2.2.1 The scope of the required technical documentation covers the ship's data and specification, general arrangement plan, capacity plan, as well as technical documentation subject to approval, specified in particular Parts of the *Rules*.

4.2.3 Scope of Initial Survey

4.2.3.1 Materials, components, machinery and equipment intended for the ship construction shall comply with the requirements specified in the *Rules* and are to be certified by PRS. To comply with the above conditions, all materials, components, machinery and equipment are to be ordered by the Navy and Shipyard with PRS certification. In well-grounded cases, upon previous agreement, PRS may reclassify materials, components, machinery and/or equipment, which were previously certified by another classification societies or by the Navy Supervision. Such reclassified materials, components, machinery and/or equipment may be installed on ships to be assigned PRS class.

4.2.3.2 The ship's hull and the main engine shall be constructed under direct PRS' survey. Furthermore, the shipyard and the main engine manufacturer shall have relevant certificates confirming their ability to construct the ship's hull and the main engine.

The scope of the construction survey in the shipyard covers:

- survey during construction of the hull parts and their assembly,
- survey of installation of machinery, equipment and associated systems,
- survey of strength and tightness tests.

In well-grounded cases, after reclassification, PRS may accept another components, machinery and equipment, which were previously certified by another classification societies or by the Navy Supervision.

4.2.3.3 The scope of the Initial Survey (construction survey) of a ship is each time specified by the PRS Branch Office on the basis of the *Rules*, the approved technical documentation and the local building conditions.

4.2.3.4 After completion of the installation of particular systems, dock trials are performed.

4.2.3.5 After completion of the ship's construction, sea trials are performed.

4.3 Ship with Valid Class Assigned by another Classification Society

4.3.1 Conditions of Class Assignment

4.3.1.1 An existing ship, with valid class of another Classification Society, may be assigned PRS class after examination of technical documentation, referred to in 4.3.2 and after completion of the Initial Survey for Assignment of Class in the scope, referred to in 4.3.3.

If the Navy is not able to submit the required technical documentation (wholly or in part), the equivalent information is to be submitted to PRS, within the scope enabling to assess the ship's structure and equipment.

In well-grounded cases, PRS may accept an examination, measurements or tests carried out under the survey of the previous Classification Society or the Navy Supervision.

PRS *Certificate of Class* validity is determined by PRS in each particular case and it cannot exceed the validity of the *Certificate of Class* issued by the previous Classification Society.

4.3.2 Scope of Technical Documentation

4.3.2.1 Main plans:

- Ship's data and specification;
- General Arrangement Plan;
- Capacity Plan;
- Body Lines;
- Hydrostatic Curves;
- Loading Manual, where required;
- Information on Stability and Information on Damage Stability, where required.

4.3.2.2 Hull plans:

- Midship Section;
- Longitudinal Section;
- Scantling Plan for Bottom, Bow and Stern;
- Decks;
- Shell Expansion;
- Transverse and Longitudinal Bulkheads;
- Rudder Arrangement;
- Hatch Covers;
- Drawings of Superstructures;
- Specific Parts for Ship Type, e.g. dock cells, desant ramps.

4.3.2.3 Machinery plans:

- Machinery Arrangement;
- Fire Control Plan;
- Shafts Lines;
- Main Engines, Propulsion Gears and Clutch Systems (or the manufacturer, type and rating information);
- For steam turbine ships: Main Boilers, Superheaters and Economizers (or the manufacturer, type and rating information) and Steam Piping;
- Bilge and Ballast Piping Diagram;
- Wiring diagram (electric balance of a ship, principle diagram of power distribution circuits, principle diagram of the main and emergency switchboards);
- Automation System Scheme covering the system structure, type of power and connection with other systems;

- Rudder Arrangement or Propeller – Rudder Arrangement, as well as information on the manufacturer and the type of Steering Gear;
- Special Gear Schemes;
- Refrigerating Plant General Arrangement Plan;
- Refrigerating Plant Schemes.

4.3.2.4 Torsional Vibration Calculations (for ships less than 2 years old).

4.3.2.5 Additional documentation for ships with ice strengthening:

- Plans for flexible couplings or torque limiting shafting devices in the propulsion line shafting (or the manufacturer, type and rating information).

4.3.2.6 Additional plans required for a ship to be assigned unattended machinery space mark:

- instrument and alarm list;
- fire alarm system;
- list of automatic safety functions (e.g. slow-downs, shut-downs, etc.);
- function testing plan.

4.3.2.7 Technical Documentation of statutory equipment is specified in each case by PRS.

4.3.3 Scope of Initial Survey

4.3.3.1 The scope of the Initial Survey, carried out by PRS, covers:

- checking documents and reports issued by the previous Classification Society;
- checking certificates for essential parts of the main propulsion, as well as essential machinery and equipment, issued by the recognized Classification Society;
- completion of all overdue and due Periodical Surveys as specified in ship status by the previous Classification Society;
- examination of execution of all recommendations and class conditions as specified in ship status by the previous Classification Society;
- carrying out survey in scope specified in 4.3.3.2.

4.3.3.2 If the Initial Survey is carried out on the date other than the date of Periodical Survey, the scope of the survey is to cover at least:

- for each ship, the survey within the scope of the Annual Survey;
- additionally, for ships of 6 years of age and above, examination of the representative ballast and cargo spaces, selected by PRS;
- for all ships of 18 years of age and above, the survey within the scope of at least an Intermediate Survey;
- bottom survey. PRS may not require the bottom survey if it considers that the bottom survey carried out by the previous Classification Society complies with the PRS *Rules* and procedures;
- general examination of all essential machinery and electrical equipment;

- checking the adjustment of safety valves*¹ of all steam boilers, economizers and steam generators, as well as examination of oil fuel burning equipment under working conditions;
- verification of all pressure vessels in accordance with the submitted technical documentation and certificates;
- test of insulation resistance, generator circuit breakers, preference tripping relays and generator prime mover governors; paralleling and load sharing is to be proved;
- examination of navigation lights and indicators, verification of their working and alternative sources of power;
- examination, under working condition, of bilge pumps, emergency fire pumps and remote controls for oil valves, oil fuel pumps, lubricating oil pumps and forced draught fans;
- examination of water recirculating and ice clearing arrangements, if any;
- examination, under working condition, of the main and all auxiliary machinery necessary for the ship operation at sea, including their installations and essential controls, as well as the main, auxiliary and emergency steering gear;
- examination, under working condition, of statutory equipment;
- verification of initial start arrangements;
- short sea trials.

4.4 Ship Not Classed Before

4.4.1 Conditions of PRS Class Assignment

4.4.1.1 A ship, which has not been classed before, may be assigned PRS class after approval, by PRS, of technical documentation within the scope specified in 4.4.2 and after completion of the Initial Survey within the scope specified in 4.4.3.

Where the Navy is not able to submit the required technical documentation (wholly or in part), the equivalent information is to be submitted to PRS, within the scope enabling to assess the ship's structure and equipment.

PRS *Certificate of Class* validity will date from the time of the Initial Survey completion.

4.4.2 Scope of Technical Documentation

4.4.2.1 Technical documentation to be approved is to be submitted to PRS within at least the scope specified in 4.3.2.

4.4.2.2 PRS may require submission of an additional technical documentation specified in particular Parts of the *Rules*.

*¹) Where the setting of safety valves can be done during sea trial only and provision for such a trial, on the survey completion, has not been made, PRS' Surveyor may authorize the ship's Chief Engineer to set and seal utilization boiler safety valves, as well as to enter appropriate record in the engineer's log book. The record is to be presented to PRS' Surveyor at the nearest survey.

4.4.3 Scope of Initial Survey

4.4.3.1 The scope of the Initial Survey covers:

- verification of certificates for all essential machinery and equipment;
- completion of the Initial Survey within the scope of Class Renewal Survey (see 5. 5), depending on the ship type and age;
- survey of dock and sea trials, specified by PRS in each particular case.

4.5 Ship with PRS or another Classification Society's Class Withdrawn

4.5.1 The condition for assignment of class to a ship whose class was withdrawn is carrying out the Initial Survey for class reinstatement within the scope determined in each particular case by PRS, with due regard paid to the reasons for class withdrawal.

PRS *Certificate of Class* validity is determined by PRS in each particular case.

5 MAINTENANCE OF SHIP'S CLASS – INTERVALS BETWEEN SURVEYS AND SURVEYS SCOPE

5.1 General

5.1.1 The conditions for maintaining the ship's class are:

- maintaining the ship – the ship's hull, machinery, installations and equipment in a satisfactory technical condition,
- ship's operation in accordance with conditions specified in the *Certificate of Class*, the manufacturer's instructions and the principles of good seamanship,
- carrying out due Periodical Surveys at scheduled dates,
- carrying out recommendations at scheduled dates,
- carrying out the required Occasional Surveys.

5.1.2 All ships classed with PRS are subject, within each classification cycle, to the following Periodical Surveys:

- Annual Survey,
- Intermediate Survey,
- Class Renewal Survey.

5.1.3 All ships classed by PRS are subject to Occasional Surveys in cases specified in 5.12 and 5.13.

5.1.4 PRS informs the Navy on the dates of due Periodical and Occasional Surveys by a ship's survey status. Non-receipt of a ship's survey status does not absolve the Navy from an obligation to submit the ship for survey at the dates specified in the *Rules*.

5.1.5 The Navy is obliged to properly prepare the hull, machinery and electrical installations, as well as the ship equipment for each survey. The Surveyor may refrain from performing a survey if he/she considers that the ship has not been properly prepared for the survey or a threat to life or health exists.

If, during the survey, entering a confined space is necessary, the requirements contained in *Publication No. 47/P – Requirements for Safe Entry to Confined Spaces* are to be complied with.

5.1.6 Class Renewal Survey is to ascertain that the ship's hull and its equipment, machinery and electrical installations, other ship installations and equipment comply with the requirements of the *Rules*, and to ensure that the ship is fit for its intended purpose for the subsequent 6-year period, subject to proper operation and maintenance.

5.1.7 Annual and Intermediate Surveys are to ascertain that the ship's hull and its equipment, machinery and electrical installations, other ship installations and equipment are maintained in a satisfactory technical condition.

5.1.8 The Annual, Intermediate or Class Renewal Survey may be considered complete if an appropriate survey has been held within the scope defined in 5.3 to 5.9. PRS may extend the scope of surveys, depending on the ship's age, technical condition, as well as the type of equipment and structure.

5.1.9 After completion of Periodical Survey, PRS Branch Office endorses *Certificate of Class* or issues *Temporary Certificate of Class* to enable the ship duty. The results of Periodical Survey are subject to the PRS Head Office verification.

5.1.10 Intervals between Periodical Surveys of a ship with PRS class are dated from the classification cycle commencement.

5.1.11 Intervals between Periodical Surveys of ships, which have entered PRS class with a valid class assigned by another Classification Society, ships that have not been classed before and ships with class withdrawn, are determined by PRS (see 4.3, 4.4 or 4.5).

5.1.12 PRS may shorten the intervals between examinations, measurements or tests of hull members, particular items of machinery, installations and equipment if it is found necessary due to their technical or service conditions. In this case, new dates of surveys are to be, in general, concurrent with Periodical Surveys.

5.1.13 In well-grounded cases, PRS' Surveyor may dispense with a survey of particular items of machinery, electrical installations and equipment in dismantled condition or limit the scope of survey if external examinations, measurements and operation tests prove they are in a good and efficient condition.

5.1.14 Where, during the survey, damage to hull structure (buckling, grooving, detachment, fracture, etc.) over the allowable limits or corrosive wastage of surfaces, spaces or structure elements exceeding allowable limits, significant corrosion or other defects, which, in the opinion of the Surveyor, may affect the ship's structural integrity or the hull tightness, are found, they are to be promptly and thoroughly repaired before the ship is allowed to sail.

Areas, to be particularly considered, include:

- side shell frames, their end attachments of adjacent shell plating;
- main and top deck plating with adjacent structural members;
- bottom plating with adjacent structural members;
- watertight bulkheads and oiltight bulkheads;
- closures of openings with adjacent structures.

Where in port, where such damage has been detected, it is not possible to make thorough repairs, PRS may, at the Navy's request and after analysis of the case, allow the ship to proceed to the port or shipyard where adequate repair is practicable.

In such cases, temporary repairs allowing such voyage may be required.

5.1.15 In the case of significant repairs to main propulsion, auxiliary machinery, steering gear and the other essential equipment, dock trials are to be carried out. A sea trial may be also required in specified cases.

5.1.16 Thickness measurements of hull structural members required for the given Class Renewal Survey are to be carried out, where practicable, in advance, but not before the Annual Survey preceding Class Renewal Survey.

5.1.17 Where remote inspection techniques are intended to be used for internal examinations, they may be used subject to PRS' consent and on conditions agreed with PRS.

5.1.18 Services, which constitute the basis for the ship technical condition assessment by PRS, such as:

- examination of the underwater part of hull by diver;
- thickness measurements of hull structure;
- non-destructive and destructive tests;
- surveys and tests of fire-extinguishing systems;
- inspection and tests of equipment;

as well as all repairs which affect the ship's technical condition, such as:

- hull structure repairs;
- renovations of machinery and equipment (such as: main engines, main gear, shafts, main and emergency generating sets, boilers and pressure vessels, anchoring equipment and steering gear, propellers, compressors, fire, bilge and water ballast pumps, main and emergency switchboards);
- repairs with the use of special processes and procedures (welding, laminating, pulverization, Metalock repair, filling with chemosetting products), are to be performed by sub-contractors approved by PRS (see *Publication No. 51/P – Procedural Requirements for Service Suppliers*).

In well-grounded cases, PRS' Surveyor may, at the Navy's request, agree on performance of services by a firm/person not holding PRS approval – on a single approval basis, after verifying the firm's/person's ability to perform such services.

All above-mentioned activities, performed by a sub-contractor, are to be verified by the Surveyor.

Thickness measurements of hull structure and examination of the underwater part of hull by diver are to be performed in the presence of the Surveyor.

5.1.19 In the case of repairs to the coating in ballast tanks, spaces and on hull outside bottom plating, the Navy is obliged to submit, to PRS, document confirming that the coating was applied in accordance with the manufacturer's recommendations. In the case of a routine maintenance work carried out by the ship's crew, submission of the Navy's report is required.

5.1.20 Each measurement constituting the basis for the assessment of the structure, machinery or equipment technical condition is to be carried out with

measuring devices calibrated to a recognized national or international standard. Each measuring device is to have valid calibration certificate. The Surveyor may accept, without confirmation of calibration:

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

5.1.21 Each computer software used for calculations while preparing technical documentation and data for evaluation of the ship's operation safety is to be previously approved by PRS according to *Publication No. 14/P – Principles of Approval of Computer Programs*.

5.2 Intervals between Periodical Surveys

5.2.1 Annual Survey

Annual Survey is to be held within 3 months, before and after each anniversary of the assignment of class or the class renewal.

5.2.2 Intermediate Survey

Intermediate Survey is to be held on the date of the third Annual Survey.

5.2.3 Class Renewal Survey

- .1 The Class Renewal Survey is to be held at 6-yearly intervals. In exceptional cases, however, upon PRS' agreement, 3-month extension of ship class beyond the 6th year may be granted (see 6.4).
- .2 Regardless of the provisions stated in 5.2.3.1, where the Class Renewal Survey is completed within 3 months before and after the expiry date of class validity, the validity of the new *Certificate of Class* will be not longer than 6 years from the expiry date of the previous *Certificate of Class*. For surveys completed more than 3 months before the expiry date of class validity, the period of class will start from the survey completion date.

5.2.4 Bottom Survey of Hull

- .1 The Bottom Survey of the ship's hull is to be carried out twice within each classification cycle: during Intermediate Survey and Class Renewal Survey.
- .2 The Bottom Survey during Class Renewal Survey is to be carried out in dry dock.
- .3 The Bottom Survey of ships over 15 years of age, during Intermediate Survey, upon compliance with the requirements of 5.6.3, may be carried out by divers.
- .4 The Occasional Bottom Survey may be required in the case of the ship's grounding.

- .5 The Navy is obliged to notify PRS whenever the ship's bottom can be examined in dry dock.

5.2.5 Survey of Propeller Shafts

- .1 Surveys of propeller shafts are to be carried out during each Bottom Survey.

5.2.6 Survey of Propellers

- .1 Surveys of propellers are to be carried out during each Bottom Survey.

5.2.7 Survey of Boilers

- .1 The following boilers are to be periodically surveyed:
 - steam boilers used for main propulsion,
 - auxiliary steam boilers,
 - all other steam boilers having working pressure exceeding 0.35 MPa or a heating surface exceeding 4.5 m²,
 - thermal oil boilers.
- .2 External survey of steam and thermal oil boilers is to be carried during each Annual Survey. External survey is to be carried out after internal survey and hydraulic test, if performed.
- .3 Internal surveys of steam and thermal oil boilers are to be carried out at the time of the Intermediate Survey and Class Renewal Survey.
- .4 Thermal oil boilers are subject, during the Class Renewal Survey, to tightness and strength tests with a pressure equal to 1.25 the working pressure.

5.2.8 Survey of Cargo Stowage and Lashing Equipment

- .1 Cargo stowage and lashing equipment as required in *Part III – Hull Equipment* is subject to Periodical Surveys at the time of Intermediate Survey and Class Renewal Survey.

5.2.9 Survey of Statutory Equipment

- .1 Surveys of statutory equipment are to be carried out at the time of Periodical Surveys.

5.3 Scope of Annual Surveys

5.3.1 Hull and Hull Equipment Annual Survey

The scope of the Hull and Hull Equipment Annual Survey covers as follows:

5.3.1.1 Checking:

- classification documents carried on board,
- ship's documents entries concerning overhauling and maintenance of oil tanks, holds and hull machinery and equipment by the ship's crew. In the case any entries are missing, PRS reserves for itself a right to extend the scope of survey beyond the Annual Survey,

- validity of stability booklet,
- validity of subdivision booklet, if required,
- updated list of service limitations, if required.

5.3.1.2 External examinations of:

- plating of the above-water part of the hull and weather decks, including marks (draught marks, electromagnetic radiation warning marks, load line marks, if any),
- collision bulkheads,
- other watertight bulkheads, if accessible during survey,
- bulwarks, railings and freeing ports,
- superstructures and deckhouses,
- hatch coamings and crane columns, together with stiffeners,
- hatch covers, together with tightness, securing and blocking parts,
- openings and manholes on weather decks,
- outer doors, ship side doors, skylights and scuttles,
- ventilator coamings,
- heads of air pipes, closing devices of sounding pipes and fuel supply pipes,
- closing appliances of inlets and outlets of ventilating ducts in outer superstructures,
- passageways and escape routes,
- emergency towing equipment, if required,
- towing hooks with rigging, fastenings and arches, if any.

5.3.1.3 Close-up examination of:

- suspect areas, if specified during the previous surveys,
- ballast tanks, if during the previous Intermediate Survey or Class Renewal Survey a protective coating was found in poor condition or soft coating was applied, or a protective coating was not applied from the time of construction.

5.3.1.4 Thickness measurements of:

- the plating of the above-water part of the hull, decks, hatch coamings, cargo hatches in the regions where, during examination, extensive corrosion has been found,
- hull structure in suspected areas which has been found and specified during the previous surveys,
- ballast tanks, in cases ensuing from 5.3.1.3.

5.3.1.5 Operation tests of:

- the bow, stern and side cargo doors and ramps,
- bulkhead doors,
- main and emergency steering gear,
- anchoring equipment (the windlass tests may be performed at port),
- mooring equipment;
- towing rope release, without loading the hook in its various positions, if any,
- stowage and securing, in opened up condition, of hatch covers and other covers,

- proper fit, locking and efficiency of sealing, in closed condition, of hatch covers and other covers,
 - operation tests of closing appliances hydraulic system.
- Additionally for the ship with certified ship aviation facilities and/or replenishment at sea facilities:
- the Annual Survey within the scope specified by PRS in each particular space in accordance with the relevant standard and entries in the *Certificate*.

5.3.2 Annual Survey of Machinery, Electrical Installations and Refrigerating Plant

The scope of the Annual Survey of Machinery, Electrical Installations and Refrigerating Plant covers as follows:

5.3.2.1 Checking

- classification documents on board,
- ship's documents entries concerning overhauling and maintenance of tanks, spaces, machinery and equipment by the ship's crew. In the case any entries are missing, PRS reserves for itself a right to extend the scope of survey beyond the Annual Survey.

5.3.2.2 Survey of Engine Room Machinery, Machinery Installations and Systems

- .1** Main internal combustion engine:
 - external examination of M.E. crank case safety devices,
 - external examination of M.E. high pressure fuel pipelines jacketed piping system,
 - operation tests of M.E. safety system,
 - tests of manoeuvring gear and starting arrangements, including the test of restoring normal operation of propulsion machinery after one of the essential mechanisms becomes inoperative, as well as the test of bringing into operation the ship machinery from the dead ship condition without external aid,
 - measurement of M.E. crankshaft deflection if the engine is built for such measurements.
- .2** Main and auxiliary internal combustion turbine:
 - in general, main turbine is to be surveyed according to CMS or PMS,
 - the scope of each survey is determined by PRS on the basis of the entries in machinery book.
- .3** Main steam turbine:
 - operation tests of manoeuvring arrangements – the ahead and astern manoeuvring valves, quick closing valve and servomotors, as well as speed governors (test of speed governor may be performed by simulation),
 - checking the operation of indicator of axial clearance in the turbine thrust bearing,

- checking the operation of the temperature indicator of the turbine journal bearings.
- .4** Main Gearing:
 - operation test of gears, control, alarm and stop arrangements.
- .5** Main electric propulsion:
 - operation tests of main generators and motors, electric clutches, distributing devices, control and monitoring consoles,
 - checking the high temperature alarm of the electric motors and generators of the electric propulsion plant.
- .6** Generator prime movers, including protective devices – operation tests.
- .7** Pumps with independent drive: cooling water, general use, ballast pumps, fire pumps, oil fuel and lubricating oil pumps – operation tests.
- .8** Bilge system, including high level alarm system – operation tests of the engine room system and, additionally, of holds and chain locker system.
- .9** Compressed air system, including compressors and safety valves – operation tests. Compressed air receivers – external examination.
- .10** Remote closing of the valves on fuel and lubricating oil tanks – operation tests.
- .11** Ventilation systems of engine room, compartments and holds, if required – operation test.
- .12** Operation test of the reverse mechanism of CP propeller, if fitted.

5.3.2.3 Fire Protection

- .1** Fire-extinguishing systems: water fire main system, sprinkler system, water-spraying and water screen system:
 - operation test of all pumps, including the emergency fire pump,
 - operation test of all hydrants,
 - operation test of sprinkler system connection to water fire main system,
 - operation tests of sprinkler system, water-spraying system and water screen system may be replaced by the passage test.
- .2** CO₂, halon^{*)} and other gas fire-extinguishing systems:
 - external examination of the main and local fire-extinguishing stations,
 - external examination of the available system components,
 - external examination of low pressure and high pressure fire-extinguishing medium cylinders/storage tanks. In the case of insulated storage tanks, the surface under the insulation layer is to be checked for signs of corrosion,
 - checking the date of hydraulic test of high pressure extinguishing medium cylinders,

^{*)} The use of halon systems on new ships is not permitted. This applies also to tests of the existing systems during which halon is released into atmosphere.

- checking the quantity of fire-extinguishing medium in storage tanks/cylinders. The permissible loss of CO₂ is 10% of the required quantity; the permissible loss of halon and other gas fire-extinguishing media – 5% of the required quantity,
 - checking the pressure of fire-extinguishing medium in cylinders,
 - checking the passage of fire-extinguishing medium pipelines,
 - checking the system remote operation, operation test of distribution valves, warning signalization, as well as automatic switching-off ventilating fans in protected spaces,
 - operation test of control valves.
- .3** Inert gas system:
- external examination and operation test of inert gas generator, including alarm system and stop arrangements.
- .4** Foam fire-extinguishing system:
- checking the quantity of foam generating agent. The permissible loss of foam is 10% of the required quantity;
 - checking the date of test of foam generating agent,
 - external examination and operation test of the system using sea water (without foam generating agent).
- .5** Powder fire-extinguishing system:
- checking the quality of fire-extinguishing powder. In the case of powder exchange, internal examination of powder containers is required,
 - external examination and pipe passage test.
- .6** Operation test of fire signalling system covering fire detection system, manually operated call points, warning signalization and signalization of fire doors open/closed position.
- .7** Operation test of remote stopping of: fuel pumps, lubricating oil pumps, oil and fuel separators.
- .8** Operation tests of remote closing of doors, fire dampers and other closing arrangements in fire-resisting divisions.
- .9** Operation tests of air charging system for breathing apparatus.
- .10** Checking the condition of fire-resisting divisions.
- .11** Checking that the engine room and its machinery are free from contamination by combustible materials (oil leakages, etc.) that may constitute a fire risk.

5.3.2.4 Electrical Installations and Control Systems

- .1** Tests of the main sources of electric power:
- load test,
 - parallel test run, including the test of reverse current or reverse power protection.
- .2** Overload and short circuit protection of generators – checking the settings.

- .3 Emergency sources of electric power:
 - start and operation test of emergency generating set, including test of a second independent means of starting the emergency generating set,
 - test of emergency accumulators.
- .4 Distributing devices: main and emergency switchboard, navigation lanterns switchboard, battery charging facilities, together with battery room ventilation, control and monitoring consoles, shore connection installations, section and terminal switchboards – external examination and tests.
- .5 Electric power converting installations supplying essential consumers – tests.
- .6 Electric drive of essential machinery for ship safety and operation, together with control and monitoring devices of pumps, air compressors, windlass, mooring and towing winches, steering gear, fans, watertight doors – operation tests.
- .7 Lighting installation of compartments and places important from the point of view of safety and safe navigation of ship and the safety of the people on board:
 - main lighting – external examination,
 - emergency lighting – external examination and tests.
- .8 Operation tests of internal communication and electrical signalling:
 - electric engine-room telegraph,
 - service telephone communication,
 - general alarm system.
- .9 Insulation resistance measurement of electric network and electrical equipment.
- .10 External examination of electrical equipment of the voltage over 1000 V.
- .11 External examination of electrical equipment in explosion hazardous spaces and zones.
- .12 Operation tests of main propulsion remote control system.
- .13 Operation tests of main propulsion safety system.
- .14 Operation tests of generating set automatic control system.
- .15 Operation tests of safety system of engines driving generating sets.
- .16 Operation tests of automation systems of pumps and air compressors, as well as their safety systems.
- .17 Operation tests of remote or automatic control system of bilge installation, including testing of high level alarm system.
- .18 Operation tests of engine room alarm system, including alarm system in the engineer's accommodation.
- .19 External examination of circuits.

5.3.2.5 Refrigerating Plant

- .1 Checking the Log Book of the Refrigerating Cargo Installation.
- .2 Testing the refrigerating plant under working conditions.
- .3 Examination and tests of compressors, refrigerant pumps, cooling agent pumps, cooling water pumps, defrosting system, hydraulic system of freezers.

- .4 External examination of heat exchangers, liquid separators, driers, filters, pressure vessels.
- .5 Examination, including checking the tightness of fittings and pipelines of refrigerant, cooling agent, cooling water, defrosting system, freezer hydraulic system.
- .6 Operation test of control and automatic systems of refrigerating plant installation.
- .7 Examination of the refrigerating system protective devices: valves and discs, as well as operation test of the emergency discharge of refrigerant overboard.
- .8 Examination of lining, insulation, hatch covers, doors, ventilation ducts, bilge wells and bilges and other equipment in refrigerating spaces.
- .9 Checking the thermometers, temperature measuring systems in refrigerated spaces and on the refrigerating plant installations.
- .10 Operation test of emergency ventilation system.
- .11 Operation test of sources of electric power for refrigerating plants, distributing devices, control and monitoring consoles, including checking the condition of electric motors.
- .12 Operation test of emergency lighting.
- .13 Operation test of signalling and protective devices.

5.3.3 Annual Survey of Statutory Equipment

5.3.3.1 Annual Surveys of statutory equipment are to be carried out in the scope specified in each case by PRS on the basis of International Maritime Organization and International Labour Organization requirements.

5.4 Scope of Intermediate Surveys

5.4.1 Intermediate Survey of Hull and Hull Equipment

Intermediate Survey of the hull covers the Bottom Survey of Hull according to 5.5.4, the activities to be carried out within the Annual Survey specified in 5.3.1 and, additionally, the activities specified in 5.3.2.1 to 5.3.2.5.

5.4.1.1 External examination of:

- hull spaces, specified by PRS,
- engine room spaces, as well as their casings with closing appliances,
- bottom and side fittings,
- ballast tanks:

- .1 On ships over 6 old and up to 12 years of age – examination of:
Representative ballast tanks, selected by PRS.

Where, in ballast tanks, poor coating condition has been ascertained or soft protective coating has been applied or where a protective coating was not applied from the time of construction, the examination is to be extended to close-up examination of tanks and to other ballast tanks of the same type.

- .2 On ships over 12 years old – examination of:
All ballast tanks.
Where, in ballast tanks, poor coating condition has been ascertained or soft protective coating has been applied or where a protective coating was not applied from the time of construction, the examination is to be extended to close-up examination of tanks.
- .3 Where the examinations reveal no visible structural defects, they may be limited to verification that the protective hard or semi-hard coating is in a good condition.
- .4 Where in tanks, other than the double bottom tanks, a protective hard or semi-hard coating is found to have deteriorated and has not been renewed, or soft coating was applied, or a protective coating was not applied from the time of construction, maintenance of class is to be made subject to the tanks in question being examined internally at each subsequent Annual Survey.
- .5 Where the double bottom tanks are found to be in the condition, as specified in .4, or a protective coating was not applied from the time of construction, maintenance of class may be subject to the tanks in question being examined internally at each subsequent Annual Survey.

5.4.2 Intermediate Survey of Machinery, Electrical Installations and Refrigerating Plant

5.4.2.1 The Intermediate Survey of machinery, electrical installations and refrigerating plant covers the Annual Survey activities and additionally, the Propeller Shaft and Propellers Surveys within the scope specified in 5.7.

5.4.3 Intermediate Survey of Statutory Equipment

5.4.3.1 Intermediate Surveys of statutory equipment are to be carried out in the scope specified in each case by PRS on the basis of International Maritime Organization and International Labour Organization requirements.

5.5 Scope of Class Renewal Surveys

5.5.1 Hull Class Renewal Survey No. 1 – Ships under 6 Years Old

The Class Renewal Survey No. 1 of hull and its equipment covers the Bottom Survey carried out in dry dock (see 5.6.1 and 5.6.2) and the activities specified in 5.4.1 and 5.4.2 and, additionally, the activities stated below.

5.5.1.1 Close-up examination of all spaces, including engine room spaces and pump-room (if any) – inner bottom, ship's sides plating, bulkheads, decks, 'tweendecks, structural members, piping, bilge wells and the watertight bulkhead penetrations.

5.5.1.2 Close-up examination of hatch covers (plating and stiffeners).

5.5.1.3 Close-up examination of tanks:

- .1** Forepeak and afterpeak, chain lockers;
- .2** All ballast tanks;
- .3** Cofferdams and tunnels;
- .4** If, during the examination, no damage to the structure has been found, the examination may be limited to verification that protective hard or semi-hard coating is maintained in good condition;
- .5** Where in tanks, other than double bottom tanks, a protective hard or semi-hard coating is found to have deteriorated and it has not been renewed, or where soft coating has been applied, or a protective coating was not applied from the time of construction, maintenance of class is to be made subject to the tanks in question being examined internally at each subsequent Annual Survey;
- .6** If the double bottom tanks are found to be in the condition, as specified in .5, or a protective coating was not applied from the time of construction, maintenance of class may be subject to the tanks in question being examined internally at each subsequent Annual Survey.

5.5.1.4 Close-up examination of bilges in holds and machinery compartment, as well as in cofferdams.

5.5.1.5 Close-up examination of seatings of the main engines, generating sets, auxiliary machinery and boilers.

5.5.1.6 Close-up examination of 'tweendecks hatch covers.

5.5.1.7 Close-up examination of masts, their fastenings and standing rigging.

5.5.1.8 Close-up examination of anchors, chain cables, chain slips and stoppers.

5.5.1.9 Close-up examination of bollards, mooring ropes and tow ropes.

5.5.1.10 Tightness tests of the following tanks, including air and sounding pipes:

- .1** ballast tanks;
- .2** peaks;
- .3** fuel oil tanks and fresh water tanks, selected by the PRS Surveyor.

The tanks are to be tested by filling with water to a head of liquid to the top of air pipes. Tightness test of fuel oil tanks may be done with the use of fuel oil. The tightness test of bottom tanks may be done afloat, provided that, prior to the test, examination is carried out.

5.5.1.11 Checking the operation and tightness of companion hatches and manholes on weather decks, outer doors, ship side doors, skylights and scuttles.

5.5.1.12 Checking the operation of all mechanically operated hatch covers, including:

- stowage and securing in opened up position,

- proper fit, locking and efficiency of sealing in closed position,
- operation tests of hydraulic and power components, wires, chains and link drives.

5.5.1.13 Checking the effectiveness of sealing arrangements of all hatch covers by hose testing or an equivalent method.

5.5.1.14 Thickness measurement of plating and stiffeners of hatch coamings, hatch closing devices (steel pontoons or hatch covers) on weather decks, if deemed necessary by the Surveyor.

5.5.1.15 Additionally, in suspect areas, thickness measurements are to be carried out, with 5 measurements over 1 m² of plating and 3 measurements on each stiffener web and flange.

5.5.1.16 Operation test at full load of the towing hook/towing winch release arrangement during bollard pull test, if fitted.

5.5.2 Hull Class Renewal Survey No. 2 – Ships between 6 and 12 Years Old

The Class Renewal Survey No. 2 of hull and its equipment covers the Class Renewal Survey No. 1 activities, specified in 5.5.1 and, additionally, the activities stated below:

5.5.2.1 Thickness measurement of hull structural members in suspect areas and in one transverse section of deck plating abreast a cargo space within the amidships 0.5 *L*.

5.5.2.2 Thickness measurement of chain cable links.

5.5.2.3 Close-up examination of tanks:

- one fuel oil tank and one fresh water tank selected by PRS' Surveyor.

5.5.2.4 Tightness tests of slope and sludge tanks forming structural part of hull, including air and sounding pipes.

Tightness tests of bottom tanks may be done afloat, provided that, prior to the test, examination is carried out.

5.5.3 Hull Class Renewal Survey No. 3 – Ships between 12 and 18 Years Old

The Class Renewal Survey No. 3 of hull and its equipment covers the Class Renewal Survey No. 2 activities, specified in 5.5.2, and, additionally, the activities stated below:

5.5.3.1 Close-up examination of tanks:

- fuel oil tanks situated in and outside the double bottom, selected by PRS' Surveyor,
- fresh water tanks, selected by PRS' Surveyor,
- slope and sludge tanks forming structural part of hull.

5.5.3.2 Tightness test of lubricating oil tanks, selected by PRS' Surveyor, including air and sounding pipes.

5.5.3.3 Thickness measurements of hull structural members:

- for ships less than 100 m in length, at least one transverse section; for other ships, two transverse sections within the amidships 0.5 L , abreast of two different cargo spaces;
- stiffeners in afterpeak.

5.5.3.4 Thickness measurements of plating and stiffeners of hull closing arrangements and their coamings.

5.5.4 Hull Class Renewal Survey No. 4 and the Subsequent Surveys – Ships over 18 Years Old

The Class Renewal Survey No. 4 and the subsequent surveys of hull and its equipment cover the Class Renewal Survey No. 3 activities, specified in 5.5.3, and, additionally, the activities stated below.

5.5.4.1 Thickness measurements of hull structural members:

- for ships less than 100 m in length, at least two transverse sections; for other ships, at least three transverse sections within the amidships 0.5 L , abreast of different cargo spaces;
- stiffeners in afterpeak;
- all exposed main deck plating over the whole length;
- representative exposed superstructure deck plating;
- lowest strake of all transverse bulkheads, together with stiffeners;
- strakes in way of 'tweendecks of all transverse bulkheads, together with stiffeners;
- all wind and water strakes plating;
- all keel plates and, additionally, bottom plates in way of cofferdams, machinery space and aft end of tanks.

5.5.5 Class Renewal Survey of Machinery, Electrical Installations and Refrigerating Plant

Class Renewal Survey of machinery, electrical installations and refrigerating plant covers the Annual Survey and, additionally, the activities specified in 5.5.5.1.

5.5.5.1 Machinery, electrical installations and refrigerating plant are to be examined, measured and tested within such scope as is necessary for the proper assessment of their technical condition.

.1 Main internal combustion engine:

- close-up examination of parts essential for the proper operation of the engine;
- close-up examination of machinery driven by the main engine and the engine fittings;

-
- testing of crank case safety valves;
 - close-up examination of turbochargers;
 - close-up examination of vibration damper and verification that the manufacturer's service requirements are complied with;
 - checking the timing chain pre-tension;
 - checking the tie rod pre-tension for compliance with the manufacturer's instructions;
 - checking the main engine securing to the seating.
- .2** Main and auxiliary internal combustion turbines:
- visual examination and tests in scope specified by PRS, in each particular case, in accordance with *Part VII* of the *Rules*.
- .3** Main and auxiliary steam turbines:
- close-up examination of steam turbine parts;
 - checking steam turbine securing to the seating;
 - operation tests of manoeuvring arrangements – the ahead and astern manoeuvring valves, quick closing valve and servomotors, as well as speed governor;
 - hydraulic test of manoeuvring valves – at 10-yearly intervals.
- If steam turbines are of a type which has proved to be reliable in operation and are fitted with rotor position indicators and vibration indicators of an approved type, as well as measuring equipment of steam pressure at proper locations along the steam flow, PRS may limit the Class Renewal Survey No. 1 to examination of rotor bearings, thrust bearings and flexible couplings, provided the Surveyor is satisfied from operation service records and proper trials, subsequent to the survey, that operation of the turbine and its technical condition are satisfactory. Such limitation of the survey is not applicable to the subsequent surveys for class renewal. The opening of the turbine casing may be postponed on the basis of the Navy's request, technically justified and technical and operating documentation prepared by the manufacturer.
- .4** Main electric drive:
- checking the electric motor cooling system and fan switching off alarm (for primary and secondary system).
- .5** Gearings:
- The following parts are to be opened up and examined within the necessary scope to ascertain their technical condition: pinions, gears, shafts, bearings, thrust bearing, disengaging couplings.
- .6** Couplings:
- slipping couplings – examination, including the dismantling of the cover, to assess the coupling elastic elements;
 - rubber couplings – 5 years from the date of the coupling installation or rubber element exchange – examination. At the subsequent Class Renewal Survey – examination in the dismantled condition.

- .7** Thrust shaft, including its bearings:
 - close-up examination of the shaft and bearing,
 - measurement of clearance in the bearing,
 - checking the bearing securing to the seating.
- .8** Intermediate shafts, including bearings:
 - close-up examination of shafts and bearings,
 - checking the bearing securing to the seating.
- .9** Propeller shaft and propellers – see 5.7.
- .10** Examination of generators and generator prime movers, in the dismantled condition, and tests.
- .11** Close-up examination of air compressors.
- .12** Air receivers:

Internal examination of the receiver, including the examination of fittings in opened up condition. Where the technical condition of the air receiver cannot be ascertained satisfactorily on the basis of internal examination, PRS may require the wall thickness measurement or hydraulic test to be carried out. After repair, the receiver is to be also subjected to hydraulic test.
- .13** Operation tests of the following pumps with independent drive: bilge, ballast, general use, fire, cooling water, fuel oil, lubricating oil, boiler supply and circulating water systems. In the case of incorrect operation – internal examination is to be carried out.
- .14** Operation tests of steering gear, windlass and mooring winches. In the case of incorrect operation – re-adjustment or internal examination is to be carried out.
- .15** Piping systems:
 - examination of the bilge, overflow, air and sounding pipe systems. Tightness tests of these pipes are to be carried out, together with tightness tests of tanks;
 - operation tests of ballast, cooling water, steam, fuel oil, lubricating oil, hydraulic system installations. If there is any doubt as to the technical condition of the pipes, PRS may require the hydraulic test or wall thickness measurement to be carried out;
 - hydraulic tests of pipes passing through fuel oil tanks and machinery spaces;
 - hydraulic tests of heating coils in tanks not subject to examination. In tanks subject to examination, the heating coils are to be tested, depending on their technical condition.
- .16** Examination of ventilation ducts passing through watertight bulkheads and fire-resisting bulkheads.
- .17** External and internal examination of the structure of tanks not forming structural part of the ship's hull, and examination of their fittings.
- .18** Heat exchangers:
 - internal examination,

- hydraulic test required, depending on the result of the examination and after repair.
- .19 Operation tests of generator reverse-power, overload and undervoltage protection.
- .20 Operation tests of economizers associated with the engine room systems.
- .21 Close-up examination of cables and the cable penetrations in watertight and fire-resisting bulkheads.
- .22 Close-up examination of lightning and earthing protection.
- .23 Checking the set point value of sensors of the engine-room automation systems.
- .24 Operation test of temperature, pressure, fuel viscosity control systems (when the sea trials of the ship are carried out).
- .25 Control instruments and gauges – the following are to be checked:
 - condition of the instrument – based on examination,
 - correctness of indications (on boilers and pressure vessels – by means of a control manometer and in other cases by comparing the indications of two parallel instruments).
- .26 Operation test of oily-water separator equipment and oil filtering equipment – checking the automatic and manual control.
- .27 Checking the high level alarm of the bilge water retention tank and sewage holding tanks.
- .28 Survey of cargo installations within the scope determined by PRS.

5.6 Bottom Periodical Survey

5.6.1 The Ship's Bottom Periodical Survey in Dry Dock:

- .1 examination of the bottom and side plating up to the maximum draught waterline, keel, stem, stern frame, shaft brackets, rudder trunk, Kort nozzle, stabilizer recesses, bilge keels, the anode corrosion protection;
- .2 examination of drain plugs of ballast and fresh water tanks – at the interval of 6 years; drain plugs of fuel and lubricating oil tanks, as well as cofferdams – only when the plug is screwed out;
- .3 examination of bottom and side sea chests – at the interval of 6 years;
- .4 bottom and side fittings; examination in the opened up condition – every 6 years. Where bottom and side fittings are not fitted directly to bottom chest, sea chest or shell plating, the connecting pipes between chests or shell plating and fittings are subject to close-up examination in the dismantled condition;
- .5 examination of rudder blade;
- .6 measurement of clearances in bearings of rudder arrangements and external examination when putting the rudder from side to side. Depending on the results of the clearance measurement in the bearings and external examination, dismantling of rudder blade or part of its hanging arrangements may be required;

- .7 examination of thruster propeller tunnels;
- .8 examination of propeller and others propellers, as well as the measurement of clearances and wear-down of the propeller shaft stern tube bearing and checking the stern tube sealing tightness (see 5.7);
- .9 examination and measurement of other equipment connected with the ship's manoeuvring, steering and roll stabilizing system.

5.6.2 Thickness Measurements of the Bottom Shell Plating

At the ship's Bottom Survey to be held at the Class Renewal Survey, the thickness measurement of shell plating appropriate to the age and type of ship, as specified in 5.5, is to be made. If, during any other Bottom Survey, excessive corrosion or damage has been found, thickness measurements of areas, indicated by the Surveyor, are to be carried out.

5.6.3 In-water Bottom Survey by Diver

5.6.3.1 The In-water Bottom Survey is carried out by PRS' divers.

5.6.3.2 In well-grounded cases, PRS may give consent to In-water Bottom Survey being carried out according to the following procedure:

- .1 examination of the underwater part of hull is performed by divers engaged by the Navy;
- .2 these divers have been approved by PRS;
- .3 examination carried out by divers is monitored by PRS' Surveyor;
- .4 the final assessment of technical condition of the underwater part of hull is made by PRS' Surveyor.

5.6.3.3 The In-water Bottom Survey is to provide, so far as practicable, information normally obtained from a dock survey (see 5.6.1 and 5.6.2). Where the above requirements cannot be complied with or if the In-water Bottom Survey reveals extensive corrosion or damage affecting the ship's class, the ship is to be dry-docked.

5.6.3.4 To enable the diver to perform complete examination of the underwater part of hull, the Navy is obliged to properly prepare the ship for the In-water Bottom Survey, i.e. to ensure the safety of work for the diver, clean the hull below the waterline, provide arrangements for measuring the rudder shaft bearing clearances and propeller shaft wear-down, mark the hull by means of ropes to enable the diver to determinate his own position and locate the possible damage.

5.6.3.5 The In-water Bottom Survey in lieu of Dry Docking Survey, in cases specified in 5.2.4, is carried out at the Navy's request, subject to satisfactory review, by PRS, of the Survey Programme attached to the Navy's request.

The Survey Programme is to include the following information:

- .1 Statement that neither ship grounding nor damage to the bottom structure and the associated equipment have occurred and no failure of the rudder arrangement and shaft line have been observed since the last Dry Docking Survey.
- .2 Statement that technical documentation within the following scope, as a minimum, is available on board: plan of shell expansion below the waterline, plan of tanks, plan of openings under water and their closing, plan of anodes, plan of rudder arrangement, plan of propeller shaft line sealing, drawing of propeller.
- .3 Statement that the survey will be carried out in water of proper visibility and the ship's hull below the waterline will be properly cleaned and marked to enable the diver to determine his position and locate the possible damage.
- .4 Information on the possibility and way of measuring clearances/ wear down in rudder bearings and checking the stern tube sealing tightness.
- .5 Information about the diver's company which will carry out in-water bottom examination if the examination is not to be carried out by PRS' divers-surveyors.
- .6 Classification reports and measurement records if the last Bottom Survey in dry dock and propeller shaft survey have not been carried out by PRS.

5.7 Periodical Surveys of Propeller Shaft and Propellers

5.7.1 General

5.7.1.1 Propeller shafts are subject to Complete or Modified Surveys.

5.7.1.2 During each In-water Bottom Survey, examination of the propeller shaft, as well as the measurement of clearances/wear down of the propeller shaft in stern tube and checking the stern tube sealing glands tightness are to be carried out.

5.7.2 Complete Survey of Propeller Shaft

5.7.2.1 Complete Survey is carried out after drawing the propeller shaft from the tube.

5.7.2.2 The interval between consecutive Complete Surveys cannot exceed 6 years. Where technically practicable, the first Complete Survey of the propeller shaft for new ships can be executed during the second Class Renewal Survey.

5.7.2.3 The scope of Complete Survey covers:

- checking the Chief Engineer's statement confirming proper service of the shafting system;
- non-destructive tests by an approved crack detection method:
 - for propellers fitted to a keyed shaft taper – on not less than one-third of the taper length, starting from its large end (from the shaft liner, if applied);

- for propellers fitted keyless to the shaft taper – on the forward part of the taper starting from its large end;
- for propellers fitted to a solid flange coupling at the end of the shaft – on the flange fillet area of the shaft;
- measurements of wear/allowances in the aft stern tube bearing;
- examination of bearings;
- examination of oil sealing glands, if fitted, and tightness test.

5.7.3 Modified Survey of Propeller Shaft

5.7.3.1 In the case where:

- .1 the propeller shaft is fitted with oil sealing glands of an approved type and oil lubricated bearings, and its structural elements comply with the requirements of the *Rules*;
- .2 the shaft and its fittings are not exposed to corrosion;
- .3 type of sealing makes it possible to fit new oil sealing glands without removal of the propeller (except in the case of keyed propeller);
- .4 the propeller is fitted to the shaft by one of the following methods:
 - to the taper with a key;
 - to the taper without a key;
 - to a solid flange coupling;
- .5 reliable measurement of shaft wear/allowance in the aft stern tube bearings is possible;
- .6 recording of shaft stern tube bearing temperature during shaft operation is ensured by two replaceable temperature detectors fitted in the lower part of the bearing at one-third of its length from the aft end, possibly close to the bearing surface;
- .7 the place of taking reliable samples for lubricating oil analysis has been defined,

instead of Complete Survey, in 6-year cycle, Modified Survey may be carried out.

5.7.3.2 The scope of Modified Survey covers:

- .1 checking the Chief Engineer's statement confirming proper service of the system, taking into account the oil consumption and bearing temperature records;
- .2 checking the records of the stern tube lubricating oil analysis carried out, by an appropriate method, regularly at intervals of 6 months by a laboratory approved by PRS or the manufacturer. Oil samples are to be taken under service conditions, i.e. with the shaft rotating and the system at service temperature. The samples are to be taken from the same, agreed and identified, position in the system. They are to be collected and described by the Chief Engineer;
- .3 the measurement of shaft wear/ allowance in the aft stern tube bearings;
- .4 examination of accessible parts of the shaft after removing oil sealing glands;

- .5 for keyed propellers, a non-destructive testing, by an approved crack detection method, of about one-third of the length of the taper from the large end, for which dismantling of the propeller will be required;
- .6 checking the tightness of oil sealing glands.

5.7.3.3 In each case of non-compliance with the above requirements for Modified Survey, Complete Survey is to be carried out.

5.7.4 Survey of Propellers

5.7.4.1 Survey of propellers is carried out during the Hull Bottom Survey

5.7.4.2 The survey of propeller covers:

- .1 external examination;
- .2 in the case of the propeller dismantling, close-up examination of the shaft taper and non-destructive testing of the shaft ends, as well as examination of the propeller boss;
- .3 examination of the propeller fastening to the shaft.

For controllable pitch (CP) propellers, tightness test of the propeller boss and the blade sealing, as well as checking the correctness of the CP propeller pitch change is required. The dismantling of CP propeller is not required unless considered necessary by the Surveyor.

5.7.4.3 The scope of the survey for another types of propellers is determined by PRS in each particular case.

5.8 Periodical Surveys of Boilers

5.8.1 The following boilers are to be periodically surveyed:

- steam boilers used for main propulsion,
- auxiliary steam boilers,
- all other steam boilers having working pressure exceeding 0.35 MPa or a heating surface exceeding 4.5 m²,
- thermal oil boilers.

5.8.2 External surveys of all kinds of boilers are to be carried out annually at the time of the ship's Periodical Survey. External survey is to be carried out after internal survey and hydraulic test, if carried out.

5.8.3 Internal surveys of steam and thermal oil boilers are to be carried out at the time of the ship's Periodical Survey, twice within 6-year classification cycle; however, the intervals between successive internal surveys are not to exceed 3 years.

5.8.4 Thermal oil boilers are subject, during the Class Renewal Survey, to tightness and strength tests with a pressure equal to 1.25 the working pressure.

5.8.5 The External Survey of Steam Boiler covers:

- examination of the boiler fastenings,
- examination of the boiler casing and insulation,
- external examination of the boiler fittings,
- functional test while in operation.

During the test, operation of the following items is to be checked:

- boiler and steam superheater safety valves^{*)},
- boiler supply and circulating water system,
- boiler blow-off and skimming system,
- water level indicators,
- pressure gauges,
- remote control of the main steam valve and safety valves,
- fuel supply system,
- boiler automatic system,
- boiler safety system,
- boiler alarm system.

5.8.6 The External Survey of Thermal Oil Heater covers:

- external examination,
- operation tests of safety valves,
- checking the operation of alarm and safety systems of limit temperature of thermal oil and exhaust gases,
- checking the correctness of pressure gauges indications,
- operation tests of the valves remote control,
- operation test of the arrangements for emergency discharge of thermal oil from installation and remote stopping the circulating pumps.

5.8.7 Internal Survey of Steam Boiler

5.8.7.1 For the purpose of the internal survey, both sides, water and combustion, of the boiler are to be sufficiently clean to enable a proper assessment of the examined parts (water and steam drums, boiler furnace, combustion chambers and furnaces, tubes, stays and stay-bolts, steam superheaters and economizers).

At the Boiler Survey, examination of the boiler mountings, in dismantled condition, is to be carried out.

5.8.7.2 If, upon examination, there is any doubt as to the condition of the boiler, PRS may require that additional thickness measurements of boiler parts, partial or complete removing of insulation or hydraulic test should be carried out.

^{*)} Where the setting of safety valves can be done during sea trial only and provision for such a trial, on the survey completion, has not been made, PRS' Surveyor may authorize the ship's Chief Engineer to set and seal utilization boiler safety valves, as well as to enter appropriate record in the engineer's log book. The record is to be presented to PRS' Surveyor at the nearest survey.

5.8.7.3 After repair of the boiler, hydraulic test to a pressure 1.25 the working pressure is to be carried out.

5.8.7.4 On repair of the boiler mountings, hydraulic test to a pressure specified in *Part VI – Machinery Installations and Refrigerating Plants* is to be carried out.

5.8.7.5 If, during the Periodical or Occasional Survey, damages that require repair of the boiler are detected, the repair is to be performed under the Surveyor's supervision according to the repair procedure, approved by PRS. After repair, the boiler is to be tested, as specified in 5.8.7.3.

5.8.8 The Internal Survey of Thermal Oil Heater

5.8.8.1 The internal survey of thermal oil heater is carried out within the scope of the applicable requirements given in 5.8.7.

5.9 Continuous Surveys and other Alternative Survey Systems

5.9.1 At the written request of the Navy, instead of direct survey, PRS may accept Continuous Survey or other alternative survey system for specified items of the ship's hull, machinery installations and refrigerating plants, as well as automatic systems.

5.9.2 Continuous Surveys or other Alternative Survey Systems are to be carried out at the time of the Annual Survey.

5.9.3 Continuous Survey of Hull (CHS), as well as Consolidated Supervision System of Hull (CSS) are carried out in accordance with the requirements of *Publication No. 54/P – Alternative Hull Survey Arrangements*.

5.9.4 Continuous Survey of Machinery (CMS), as well as Planned Maintenance Scheme (PMS) of machinery are carried out in accordance with the requirements of *Publication No. 2/P – Alternative Survey Arrangements for Machinery*.

5.10 Renewal Survey of Statutory Equipment

5.10.1 Renewal Surveys of statutory equipment are to be carried out in the scope specified by PRS on the basis of International Maritime Organization and International Labour Organization requirements.

5.11 Periodical Surveys of Cargo Stowage and Lashing Equipment

5.11.1 Cargo stowage and lashing gear and equipment for fastening cargo units on board, as well as the equipment intended for the carriage of timber on weather deck if any part of timber volume is taken into account in calculations of cross curves of stability, covered with the requirements of *Part III – Hull Equipment*, are subject to Periodical Surveys at the time of Class Renewal Survey within the scope specified in 5.11.2.

5.11.2 The scope of 6-yearly survey covers:

- .1** checking the entries of the Annual and Intermediate Surveys made by the person responsible for the ship's cargo stowage and lashing equipment according to the provisions given in the Register Book of Examination of Equipment for Positioning and Lashing of Cargoes on Ship;
- .2** verification that the equipment provided on ship has appropriate valid documents issued by PRS, certificates, test certificates (of manufacturers or laboratories approved by PRS);
- .3** examination of: lashing (rope, chain, rod), twistlocks and bridge fittings, spreaders, stretchers, tensioners, cellular guides, foundations and posts, stowage bottom plates, stowage cones, stacking cones. 1% of fittings of each kind, but not less than 10 pcs, are to be subjected to close-up examination;
- .4** measurements of lashing, twistlocks and bridge fittings, spreaders, stretchers, tensioners, cellular guides, stowage bottom plates, etc;
- .5** at least 0.5% of the fittings is to be subjected to test load – 1.1 the working load, depending on close-up examination and measurements results or if loss of strength is supposed to occur due to corrosion and wear or in the case where the equipment condition cannot be satisfactorily ascertained based on external examination.

5.12 Occasional Surveys**5.12.1 General**

5.12.1.1 Occasional Surveys of a ship or the ship's machinery, arrangements, installations or equipment are held upon request in all cases not covered by the Initial and Periodical Surveys or surveys resulting from Alternative Survey Systems.

5.12.1.2 Occasional Survey may be held at the Navy's request or may be consequent upon PRS or the Navy Authority verification of the performed classification activities correctness (see 5.13).

5.12.1.3 The scope of Occasional Surveys and their procedure will be determined by PRS, depending on the purpose of the survey, age and technical condition of the ship. Performance of the survey resulting from classification activities verification may be the condition for class maintenance.

5.12.2 Survey After Damage

5.12.2.1 One of Occasional Surveys is a Survey After Damage to which a ship is to be submitted in the case of the ship's grounding, damage sustained by the ship's hull, machinery, arrangements, installations, equipment or outfit covered by the requirements of the *Rules* and subject to PRS' technical supervision.

The Navy is obliged to report damage or the ship's grounding to PRS as soon as possible.

5.12.2.2 The Survey After Damage is to be carried out at a port where the damage occurred or at the first port the ship calls after the damage or grounding.

The aim of the survey is to assess the extent of damage, specify the scope of work required to eliminate the consequences of damage and to determine the possibility and conditions for maintenance or reinstatement of the ship's class.

If the ship is in a port where repairs connected with damage cannot be made, at the Navy's request and after analysis of the case PRS may allow the ship to undertake a single trip directly to the port or shipyard, where the specified repairs will be possible.

In such case, discharging of cargo and/or temporary repairs to allow the ship to undertake such trip may be required.

5.13 Audits

On PRS classed ships, audits for determining conformity of PRS performed processes with the quality system provisions, may be required.

At PRS' request, the Navy is obliged to submit the ship for auditing within the scope, at a date and place agreed with PRS.

6 SUSPENSION OF SHIP'S CLASS

6.1 Reasons for Ship's Class Suspension

6.1.1 Damage to a Ship

The Navy is obliged to notify PRS of each case of the ship's grounding and every damage sustained by the ship's hull, machinery, installations or equipment covered by the requirements of the *Rules*, as well as to agree with PRS the date of After Damage Survey and the procedure for:

- determining the extent of damage,
- determining the scope and date of repair.

The ship's class is automatically suspended from the time of damage occurrence until completion of After Damage Survey confirming elimination of class suspension reasons.

In well-grounded cases, after receiving notification from the Navy and its review, PRS may decide that the ship's class will not be suspended.

6.1.2 Transgression of Service Conditions Specified in the Certificate of Class

The Navy is obliged to inform PRS on every transgressing the service conditions specified in the *Certificate of Class* and PRS will make a decision on further proceedings. Transgression of service conditions, without PRS' agreement, causes the ship's class automatic suspension until After Damage Survey completion.

6.1.3 Suspension of Class in the Case of Overdue Periodical Surveys

6.1.3.1 Class Renewal Survey

The ship's class is automatically suspended in the case when the Class Renewal Survey has not been completed by the due date.

The class will be reinstated upon satisfactory completion of the due surveys.

The ship is disclassified from the date of suspension until the issue of a new *Temporary Certificate of Class*.

6.1.3.2 Annual Survey

The *Certificate of Class* becomes invalid and the ship's class is automatically suspended if the Annual Survey is not completed and the *Certificate of Class* is not endorsed within 3 months from the due date of the Annual Survey.

The *Certificate of Class* validity will be reinstated upon satisfactory completion of the due survey.

The ship will be disclassified from the date of class suspension until the validity of the *Certificate of Class* is endorsed.

6.1.3.3 Intermediate Survey

The *Certificate of Class* becomes invalid and the ship's class is automatically suspended if the Intermediate Survey is not completed and the *Certificate of Class* is not endorsed within 3 months from the due date of the Intermediate Survey.

The *Certificate of Class* validity will be reinstated upon satisfactory completion of the due survey.

The ship will be disclassified from the date of class suspension until the validity of the *Certificate of Class* is endorsed.

6.1.3.4 Alternative Surveys

In the case where all due and overdue surveys of the ship's hull, machinery installations, refrigerating plants and automatic systems in Continuous Survey, as well as all surveys of the ship's hull in Consolidated Supervision System and the surveys of machinery installations, refrigerating plants and automatic systems in the Planned Maintenance Scheme are not dealt with at the time of the Annual Survey, the ship's class may be suspended. At the Navy's request, PRS may give consent to postponement of the surveys; the postponement is not to exceed 3 months.

In the case of Class suspension, the *Certificate of Class* validity will be reinstated upon satisfactory completion of the specified surveys.

The ship will be disclassified from the date of class suspension until the surveys completion.

6.1.4 Suspension of Class in the Case of Overdue Recommendations

Each recommendation is assigned a due date for completion. The Navy will be notified by PRS of these dates and that the ship's class will be subject to suspension if the item is not dealt with, or postponed by agreement with PRS by the due date.

The *Certificate of Class* validity will be reinstated upon PRS' verification that the overdue recommendations have been satisfactorily dealt with.

The ship will be disclassified from the date of class suspension until the recommendations are dealt with.

6.2 Dual Classed Ships

6.2.1 The request for a dual classed ship survey is to be submitted by the Navy to both Classification Societies simultaneously.

6.2.2 PRS notifies the other Society of receiving the Navy's request for carrying out the ship survey.

6.2.3 Surveys carried out by PRS are performed also on behalf of the other Society unless the co-operation agreement requires otherwise.

6.2.4 When a decision is made by PRS to suspend the ship's class, PRS, within 5 working days, will advise the other Society of the reasons for such action. If the other Society does not present arguments stating that the reasons for class suspension are not well grounded, the ship's class will be suspended.

6.2.5 When a decision for the ship's class suspension, for technical reasons, is made by the other Society, PRS will also suspend the ship's class unless it can otherwise document that such suspension is not well-grounded.

6.3 Notification to the Navy Authority

PRS will notify the relevant Navy Authority of the suspension of class and reinstatement of the ship's class.

6.4 Postponement of Class Validity

In special circumstances PRS may, at the Navy's request, grant an extension of Class validity for a maximum of 3 months, if the ship, at the time when the *Certificate of Class* expires, is at sea.

Class validity may be postponed, provided that:

- there is documented PRS' consent to such an extension prior to the expiry date of the *Certificate*,
 - positive arrangements have been made for attendance of the Surveyor at the first port of call,
 - PRS is satisfied that there is technical justification for such an extension.
-

7 WITHDRAWAL OF SHIP'S CLASS AND WITHDRAWAL THE SHIP FROM PRS REGISTER

7.1 Reasons for Ship's Class Withdrawal

7.1.1 Introduction of alterations to hull, superstructures and deckhouses, machinery, equipment and installations, covered by the requirements of the *Rules*, without the prior agreement with PRS.

7.1.2 Suspension of class for a period exceeding 6 months.

At the Navy's request, PRS may grant a longer suspension period when the ship is not in duty as in the event of awaiting PRS' decision in the case of a casualty or attendance for class reinstatement.

7.1.3 The ship has sunk.

7.1.4 The ship has been transmitted for scrapping.

7.1.5 The written request of the Navy for the ship withdrawal from PRS Register.

7.2 Withdrawal of Ship from PRS Register

Withdrawal of ship from PRS Register is consequent upon the ship's class withdrawal for reasons specified in 7.1.

7.3 Notification to the Navy Authority

PRS will notify the relevant Naval Authority of the ship's class withdrawal and the ship's deletion from PRS Register.

8 LAY-UP AND RECOMMISSION OF A SHIP

8.1 At the Navy's request, a ship may be laid-up, while maintaining her class. The request is to include:

- the planned lay-up period,
- ship lay-up location (quay, roadstead, etc.) during the ship's lay-up period,
- a list of machinery (e.g. boilers, generating sets, bilge pumps, etc. – identification numbers should be given) that will be kept in service during the ship's lay-up period,
- a list of the ship's crew during the ship's lay-up period.

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

8.3 During the laying-up period, the machinery items specified in the list (see 8.1) are subject to surveys carried out at intervals of Periodical Surveys.

8.4 For a laid-up ship, other Periodical Surveys, specified in 5.1.2, are automatically postponed until the survey for the ship's recommissioning.

8.5 Recommissioning of the ship to service is made at the Navy's request, upon carrying out survey within the scope agreed with PRS in each particular case.

The survey is to cover at least all due and overdue Periodical Surveys and recommendations.

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

Appendix 1**EXPLANATION OF SELECTED ABBREVIATIONS ASSOCIATED WITH ADDITIONAL MARKS IN THE SYMBOL OF CLASS**

Abbrev.	English definition	Polish definition
HSC	high speed craft	jednostka szybka
PET	petroleum tank	zbiornik paliwa napędowego
SD	strengthened deck	pokład wzmocniony
MD	movable deck	pokład ruchomy
LAL	lying aground during loading	osiadanie na dnie przy załadunku
CG	cargo grabs	urządzenia przeładunkowe chwytakowe
IWS	In-water survey	przegląd na wodzie
PAC	protection against corrosion	ochrona przed korozją
MS	mooring at sea	cumowanie w morzu
CHS	continuous survey of hull	nadzór stały kadłuba
CMS	continuous survey of machinery	nadzór stały urządzeń maszynowych
CSS	consolidated supervision system	skonsolidowany system nadzoru
PMS	planned maintenance scheme	system planowego utrzymania urządzeń