Section 2

CLASSIFICATION

1. GENERAL

1.1 Rules and Regulations

1.1.1 Underlying BRS Rules and regulations

The classification of ships, of other floating units and of any pertinent equipment is based on

– the respective latest edition of the Rules for Classification and Surveys of Bulgarian Register of Shipping (BRS), as well and on

– the Construction Rules relating to the respective ship type or installation, as applicable on the date of conclusion of the contract between shipyard (manufacturer) and shipowners (client). See also 4.1.

The "Construction Rules" cover Rules for materials and welding and any other special Rules published by BRS that may be applicable from case to case [1].

1.1.2 Statutory rules and regulations

National rules and regulations as, for instance, adopted by the respective flag state will as a matter of principle not be affected by the Rules for Classification and Surveys. Various requirements stipulated by international conventions are taken into account in the BRS Rules.
See also Section 3, 1.4.

1.2 Scope

1.2.1 Classification covers the ship's hull and machinery, including all electrical installations. For sailing ships, the rigging is also included.

1.2.2 On application, certain installations - e.g. refrigerating installations - may be classed separately (see 1.2.5).

1.2.3 BRS reserve the right to extend the scope of classification to all equipment and machinery used in the operation of the ship, which by their character and/or arrangement may impair the safety of human life, of the ship and her cargo or of the environment.

1.2.4 Structural systems and equipment determining the ship type are subject to examination within the scope of classification, if the ship type is specified in the form of a notation affixed to the character of classification (cf. 3.3.1.4).

---

[1] For the classification and construction of offshore installations (e.g. diving systems, submersibles, offshore structures) the Rules for Underwater Technology and the Rules for Offshore Installations are applicable.

1.2.5 Refrigerating installations

1.2.5.1 For the purpose of the present rules the following are considered to be refrigerating installations:

– Cargo refrigerating installations for the refrigeration of insulated cargo holds,

– container refrigerating installations for the refrigeration of insulated containers,

provided that the refrigerating installations are permanently installed and form an integral part of the ship.

The refrigerating installation includes the technical installations required for power supply.

1.2.5.2 Reefer units which can be connected to a container and transported in combination therewith, and containers with or without a reefer unit, are subject to BRS "Regulations for the Construction, Repair and Testing of Freight Containers".

1.3 Class certificate, characters of classification

1.3.1 Assignment of class, issuance of the class certificate, and assignment of the corresponding character of classification and notations thereto are conditional upon proof being furnished of compliance with the BRS Construction Rules in force on the date of placing of the order (see 1.1.1).

1.3.2 BRS reserve the right to add special remarks in the class certificates, as well as information regarding operation of the ship which is of relevance for the vessel's class.

1.4 Register

1.4.1 General

The classification data of each ship classified will be included in the BRS data file. An extract of these ship data will be entered in the Register Book published by BRS.

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

1.4.2 Refrigerating installations

The refrigerating installations classed by BRS are recorded in the Register Book, with indication of the character of classification, and are entered in the list of ships holding refrigerating installation certificates.

2. VALIDITY OF CLASS

2.1 Period of class

The hull, the machinery and any special equipment classed have the same period of class (duration of one class period). The class continues to be valid, provided that the hull and the machinery are subjected to all surveys stipulated and that any repairs required are carried out to the satisfaction of BRS (cf. Sections 3 and 4).

2.2 Prerequisites for validity of class

2.2.1 The class assigned by BRS is valid only subject to the conditions stated in the class certificate (e.g. range of service, freeboard, main engine output). Class assignment is conditional upon the ship, including her machineries, being loaded and operated such as to comply with the design concept, and with the applicable rules and regulations.

This also applies to the distribution of cargo and ballast, if necessary to the securing of cargo, as well as to the operation of the ship in heavy weather.

2.2.2 If the hull and/or machinery are not subjected to the prescribed surveys on their due dates, vessel's class will be suspended for both hull and machinery.

If special shipboard equipment classed is not subjected to the prescribed surveys on their due dates, the class of the special equipment only will be suspended.

2.2.3 BRS Head Office or one of the Society's representations are to be immediately informed about any average or deficiencies and damages to hull and machinery or other equipment classed, where these may be of relevance to the vessel's class. A survey will have to be arranged for a date no later than that of vessel's arrival at the next port.

If the survey reveals that vessel's class has been affected, it will be maintained only on condition that the repairs or modifications demanded by BRS will be carried out within the period specified by the Surveyor. Until full settlement of recommendations the class will be restricted. See also 2.4.1.

2.2.4 Any damage or excessive wastage beyond allowable limits to side shell frames, their end attachments and/or adjacent shell plating, the deck structure and deck plating, the bottom structure and bottom plating, the watertight or oiltight bulkheads and the hatch covers or hatch coamings that affect a vessel's class, to be permanently repaired immediately after the survey.

For locations where adequate repair facilities are not available, consideration may be given to allow a vessel to proceed directly to a repair yard. This may require discharging of the cargo and/or temporary repairs for the intended voyage.

Damages or excessive wastage at the areas noted above and not immediately affecting the vessel's structural or watertight/weathertight integrity may be temporarily repaired for a period to be defined.

2.2.5 The spare parts stipulated be the Construction Rules to be carried on board must be in a condition ensuring usability.

2.2.6 In exceptional cases, following inspection of hull and machinery, performance of the repairs required for maintenance of the original class may be dispensed with, if owners agree to the class and/or the range of service being restricted, or possibly a higher freeboard being assigned.

2.2.7 Apart from the class certificates any other documentation of significance for classification is to be kept on board and made available to the Surveyor on request, such as

– reports on surveys previously performed

– approved drawings and other documentation handed out to owners together with the class certificates and containing particulars or instructions of significance in respect of the classification requirements (e.g. use of higher-tensile steel; lists of spare parts).

2.3 Repairs, conversions

2.3.1 Where parts are damaged or worn to such an extent that they no longer comply with the

requirements of BRS, they are to be repaired or replaced.

2.3.2 Maintenance work, repairs and conversions of ships and special equipment classed have to be carried out under the supervision of BRS to ensure maintenance or reassignment of class.

2.3.3 The areas affected by the repair and conversion are to be treated in the same way as newbuildings, irrespective of whether the hull, the machinery including the electrical installation, the inert gas system, automated systems or other equipment classed are concerned.

2.3.4 If following major conversions a new character of class and/or new notations are assigned so that new certificates have to be issued, commencement of a new period of class may be agreed upon.

2.4 Class expiry

2.4.1 Where hull and machinery are found to no longer comply with the requirements on which class assignment had been based, or where owners refuse to have repairs or modifications required by BRS carried out within a period to be determined from case to case, vessel's class will cease to be valid. The same applies to the class of special equipment.

2.4.2 If owners are not interested in maintenance of class or reclassification of the vessel or any of its equipment classed, BRS will have to be informed accordingly. The class certificates will have to be returned to BRS.

2.4.3 If for some reason the class has expired or has been withdrawn or suspended by BRS, this will be indicated in the Register Book.

2.4.4 If following withdrawal of vessel's class the repairs required by BRS have been carried out and the ship has been subjected to a reclassification survey, the original class may be reassigned with a new period of class. Such surveys are to be carried out in accordance with the requirements for a class renewal survey.

2.5 Laid-up ships

2.5.1 The period of class of hull and machinery will not be interrupted throughout the laying-up period. This means that periodical surveys will have to be carried out as before; surveys due, for which drydocking is required, may be postponed until recommissioning.

Apart from this, the regulations of the preceding paragraphs are to be applied.

2.5.2 Upon expiry of the class, a survey substituting the class renewal survey will have to be performed. An entry on the class renewal will be made in the class certificate, with the notation "Laid-up Ship", and published in the Register Book.

2.5.3 At the time of recommissioning a thorough survey of the entire machinery will have to be performed in addition to the outstanding periodical surveys. Depending on the duration of the laying-up period, a sea trial and/or recommissioning trials of specific installations and/or components will have to be carried out.

3. CHARACTERS OF CLASSIFICATION AND NOTATIONS

3.1 General

3.1.1 Within the scope of classification, the characteristic features of hull, machinery and equipment are reflected in the **Character of Classification** (see 3.2) and **Notations affixed to the Character of Classification** (see 3.3).

Some examples of class notations and certificate entries as per 1.3.2 are quoted in 3.3.1 (hull), 3.3.2 (machinery) and 3.2.3 (special equipment).

(A list of class notations can be obtained from BRS.)

Yachts and small watercraft: See 6.

3.1.2 Class designation

The following example shows a complete class designation for hull and machinery:

	Characters of Class	**Notations**
Hull	BR 100A5	Ice 1CONTAINER SHIP
Machinery	BR MC	Ice 1 AUT

3.2 Characters of classification, definitions

3.2.1 Hull

100 A5 The ship's hull fully complies with the requirements of the Construction Rules of BRS or other rules considered to be equivalent.

90 A 3, 80 A 2, 70 A 1 (as examples):

The ship's hull does not comply or no longer fully complies with the requirements of the Construction Rules of BRS; however, the class may be maintained for a shorter period and/or with shorter survey intervals.

The figures 100, 90, etc. indicate the maintenance condition of the ship's hull in relation to the requirements of the Construction Rules, taking into account the permissible corrosion and wear tolerances. The figures 5, 3, etc. indicate the duration of the period of class, in years.

3.2.2 Machinery

MC The machinery and all installations covered by classification comply with the requirements of the Construction Rules of BRS or other rules considered to be equivalent.

A –MC The machinery of non-self-propelled vessels and floating units complies with the

requirements of the Construction Rules of BRS or other rules considered to be equivalent.

$\overline{\text{MC}}$, $\overline{\text{A -MC}}$ The machinery does not comply or, no longer fully complies with the requirements of the Construction Rules of BRS, but functional safety and seaworthiness are ensured for the envisaged service.

3.2.3 Survey, supervision of construction

The notations have the following meaning:

BR Hull, machinery and/or special equipment (e.g. refrigerating installation) have been constructed:

– under the supervision of BRS,

– in accordance with the Construction Rules of BRS,

– from materials and components tested under BRS supervision, as applicable

.

BR Hull, machinery installation or special equipment have been constructed under the supervision of and in accordance with the rules of another recognized classification Society and have later on been classed with BRS.

3.2.4 Subdivision, damage stability

3.2.4.1 General markings

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

BR
BR Ships constructed under supervision as stated in 3.2.3 above, and for which proof of subdivision and damage stability has been furnished, one of the two notations shown on the left are assigned

3.2.4.2 Special markings

The proof of damage stability is specified by an additional 5-digit marking shown in Register Book and in the (Appendix to the) Certificate; see 1.3.2.

The **first two** digits represent the **ship type** (letter) and the **damage stability regulations** to be applied (figure), see Table 2.1.

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

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

– For ships assessed according to the **deterministic** method the figures define the **subdivision status assumed** in the damage stability calculation.

– For ships assessed according to the **probabilistic** method the figures state, in percent, the **required survival probability**.

Table 2.1

P1---	SOLAS 48	**C2---**	SOLAS Amendments 90/91, Chap. II-1, Reg 25
P2---	SOLAS 60		
P3---	IMO Resolution A.265		
P4---	SOLAS 74	**S1---**	Code of Safety for Dynamically Supported Craft
P5---	SOLAS Amendment 88, Chap.II-1, Reg 8		
P6---	IMO Resolution A.265 simplified	**S2---**	MODU Code
		S3---	IMO Resolution A.469
T1---	Bulk Chemical (BCH) Code	**S4---**	Code of Safety for Special Purpose Ships
T2---	Gas Carrier (GC) Code	**S5---**	IMO Resolution A.673
T3---	MARPOL Convention, Annex 1	**S6---**	Code of Safety for High Speed Craft
T4---	Intern. Bulk Chemical (IBC) Code		
T5---	Intern. Gas Carrier (IGC) Code	**I1---**	Rheinschiffs-Untersuchungsordnung,Chapt.11
		I2---	ADNR
C1---	Intern.Convention on Load Lines (ILLC), Reg. 27	****---**	Other, not precisely defined damage stability regulations
The letters have the following significance:		**P -** Passenger ships **C -** Cargo vessels **I -** Inland vessels **T -** Tankers **S -** Special-purpose ships	

Table 2.2

--D33	= 3-Comp.-Status, throughout entire ship's length
--D22	= 2-Comp.-Status, throughout entire ship's length
--D21	= 2-Comp.-Status, partial 1-Comp. status for specified compartments (e.g. engine room)
--D20	= 2-Comp.-Status, without damage to specified compartments (e.g. engine room)
--D11	= 1-Comp.-Status, throughout entire ship's length
--D10	= 1-Comp.-Status, without damage to specified compartments (e.g. engine room)
--P72	= required subdivision index 72% (example)

3.2.5 Special equipment

3.2.5.1 Cargo refrigerating installations - cargo vessels

KAZ Both in respect of hull and machinery, the cargo refrigerating installation fully complies with the requirements of the Construction Rules of BRS or other rules considered to be equivalent.

$\overline{\text{KAZ}}$ The cargo refrigerating installation does not in all respects comply with the requirements of the Construction Rules of BRS, but functional safety and seaworthiness are ensured for the envisaged service.

3.2.5.2 Cargo refrigerating installations - fishing vessels

RIC Both in respect of hull and machinery, the cargo refrigerating installation fully complies with the requirements of the BRS Construction Rules for Fishing Vessels or other rules considered to be equivalent.

$\overline{\text{RIC}}$ The cargo refrigerating installation does not in all respects comply with the requirements of the Construction Rules of BRS, but functional safety and seaworthiness are ensured for the envisaged service.

3.2.5.3 Diving systems

TAZ The diving system complies with the requirements of the BRS Construction Rules for Diving Systems.

3.3 Notations affixed to the character of classification, entries in the certificate

3.3.1 Hull (design, special dimensioning and/ or equipment)

3.3.1.1 Range of service

3.3.1.1. Seagoing ships

Ships complying with the construction rule requirements for a restricted range of service only will have the notations specified below affixed to their character of classification.

M (Restricted International Service)

This range of service is limited, in general, to trade along the coast, provided that the distance to the nearest place of refuge[2] and the offshore distance do not exceed 200 nautical miles, as well as to trade in the North Sea and within enclosed seas, such as the Mediterranean, the Black Sea and waters with similar seaway conditions. Trade to Iceland, Spitsbergen and the Azores is exempted.

K (Coastal Service)

This range of service is limited, in general, to trade along the coasts, provided that the distance to the nearest place of refuge[3] and the offshore distance do not exceed 50 nautical miles, as well as to trade within enclosed seas, such as the Black Sea and gulfs with similar seaway conditions.Where a permissible distance of less than 50 nautical miles has been fixed for a ship, a relevant distance will be added in brackets behind the Notation K into the class certificate [e.g. K (20)].

W (Sheltered Water Service)

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

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

I (Inland Waterway Service)

Inland waterways shall comprise:

– All national inland waterways

– All European inland waterways included in trading area “Zone 3” according to ECE Res. No. 34 (Trans/Sec. 3/104 Add. 2) as Danube river and river water system Rhein – Main – Danube

[2] Place of refuge is any naturally or artificially sheltered aquatorium which may be used as a shelter by a ship for safety.
[3] Place of refuge is any naturally or artificially sheltered aquatorium which may be used as a shelter by a ship for safety.

– Waterways / channels in way of Holland ports Amsterdam and Rotterdam included in trading

Accordingly, ships which owing to their suitability for different kinds of services have been assigned several type markings are likewise assigned several markings for their damage stability.

area "Zone 2" according to ECE Res. No. 34

– Other inland waterways with "similar waterway condition as Zone 2 and Zone 3" with wave height ($h_B \leq 1{,}2$ m and $h_B \leq 0{,}6$ m) respectively with margin 5%.

The ships with determined range of service will be supplemented by indication of respective trading area or river system, e.g. I (Danube - Zone 3).

3.3.1.2 Ice strengthening

Ships and machinery installations, which comply with the requirements of the Construction Rules relating to strengthening for navigation in ice, will have one of the ("Ice Class") notations specified below affixed to the character of classification. Except for notation Ice 0, which on application may be assigned to the hull or the machinery installation only, hull and machinery must always be assigned the same ice class. If the hull is constructed such as to comply with a higher ice class, this will be noted in the appendix to the certificate.

Ice, Ice 0, Ice 1, Ice 2, Ice 3, Ice 4: Hull and machinery have been designed such as to comply with the requirements for navigation in ice, with index 4 representing the highest notation. (Notations Ice 1 to Ice 4 correspond to ice classes IC to IA "Super" of the Finnish/ Swedish Ice Class Rules of 1985.)

Note: *With regard to ice strengthening, vessel's hull and machinery comply with the requirements of the Construction Rules (editions until 1986) the ice notations УЛ, Л, Л1, Л2, Л3 and Л4, are replaced by ice notations Ice, Ice 4, Ice 3, Ice 2, Ice 1 and Ice 0 respectively. (In this case the Finish/Swedish ice classes IC to IA "Super"cannot be assigned.)*

Ice F Hull and machinery of fishing vessels (in particular those trading in waters around Greenland and Labrador and/or in comparable sea waters) have been designed such as to comply with the relevant requirements of the BRS Rules for Fishing Vessels.

ARC1 to **ARC4:** Ice-breakers and ice-breaking cargo ships, including their machinery installations, have been designed such as to comply with the requirements of the Construction Rules for navigation in arctic waters.

Note: *For navigation in the arctic waters of Canada reference should be made to the requirements of the Canadian "Arctic Shipping Pollution Prevention Regulations", October 1972. BRS issue the "Arctic Pollution Prevention Certificate" required by these Regulations.*

3.3.1.3 Ship type/kind of cargo carried

3.3.1.3.1 Ships of a special type, design or construction, or designed to carry defined cargoes, will have a relevant descriptive notation affixed to their characters of classification, as illustrated by the following examples.

Yachts/small watercraft: See 6.

3.3.1.3.2 Dry cargo vessels

CONTAINER SHIP

Ships intended exclusively for the carriage of containers and equipped with the appropriate facilities.

OPEN TOP

Hatchcoverless Container Ships equipped with the appropriate facilities

GENERAL CARGO SHIP

Ships constructed for the carriage of general cargo which will not be carried in containers.

EQUIPPED FOR CARRIAGE OF ONTAINERS

General Cargo Ships carrying containers occasionally or as part cargo only, and equipped with the appropriate facilities.

(The validity of the aforementioned notations affixed to the class character depends on the exclusive use of container stowage and lashing elements approved by BRS and/or tested in accordance with the Society's Rules, as well as on the approval of the container stowage and lashing plan with parts lists.)

MULTI-PURPOSE DRY CARGO SHIP

Ships constructed for the carriage of general and bulk cargo.

BULK CARRIER,

Notation for all ships complying with Part 1 - Seagoing Ships, Chapter 1 - Hull Structures, Section 23, 1. to 5., contracted for new construction before 1 July 2003.

For bulk carriers contracted for new construction on or after July 1st 2003, having a length of 150 m or above and additionally complying with Part 1 - Seagoing Ships, 1 - Hull Structures, Section 23, 6. the following Notations may be assigned, depending on the loading conditions, filling ratios of the cargo holds etc.:

BC-C: for bulk carriers designed to carry dry bulk cargoes of cargo density less than 1,0 t/m^3, verified for a loading condition where at maximum draught all cargo holds are homogeneously loaded and 100 % full with a cargo density of 1,0 t/m^3.

BC-B: for bulk carriers designed to carry dry bulk cargoes of cargo density up to 3,0/m^3, verified for a loading condition where at maximum draught all cargo holds are homogeneously loaded at the same filling ratio with a cargo density of 3,0/m^3. Additionally, the **BC-C** loading conditions are to be complied with.

BC-A: for bulk carriers designed to carry dry bulk cargoes of cargo density up to 3,0/m^3 with specified holds empty at maximum draught, for a loading condition where all loaded cargo holds are homogeneously loaded at the same filling ratio with a cargo density of 3,0/m^3. Additionally, the **BC-B** loading conditions are to be complied with.

Those notations can be assigned also for Bulk carriers with $L \geq 90$ m, constructed after 1 January 2008

under IACS Common Structural Rules for Bulk carriers.

Depending on the limitations to be observed during operation as a consequence of the design loading conditions applied during the design phase, the following additional Notations may be assigned:

{no MP} for bulk carrier Notations **BC-A**, **BC-B** and **BC-C**, when the vessel has not been designed for loading and unloading in multiple ports in accordance with the conditions specified in Part 1 - Seagoing Ships, 1 - Hull Structures, Section 23, 6.

{maximum cargo density … t/m^3} for bulk carrier Notations **BC-A** and **BC-B** if the maximum cargo density is less than 3,0 t/m^3 .

{holds a, b, … may be empty} for bulk carrier Notations **BC-A.**

ORE CARRIER

Ships specially designed for the carriage of bulk cargo and ore respectively and strengthened in accordance with the BRS Construction Rules. See also 3.3.1.5.1/2.

3.3.1.2. Tankers/liquid cargo

OIL TANKER,

CHEMICAL TANKER,

LIQUEFIED GAS TANKER

Ships constructed for the carriage of liquid cargo and complying with the respective BRS Construction Rules. Suitability for the carriage of defined (dangerous) cargoes and/or compliance with relevant rules will be specially indicated, e.g.:

PRODUCT TANKER,

CHEMICAL TANKER - TYPE 1 (as an example for several designations as used in IMO Codes - cf. Sect. 4). See also 3.3.1.3.9.

3.3.1.3.4 Passenger vessels

PASSENGER SHIP Ships complying with the construction rules and safety regulations in force for the carriage and/or accommodation of passengers (in particular SOLAS).

3.3.1.3.5 Carriage of motor vehicles

RO-RO SHIP Ships equipped with ramps and possibly shell doors and strengthened in accordance with the BRS Construction Rules, to enable motor vehicles to enter.

EQUIPPED FOR CARRIAGE OF CARS Ships provided with special equipment for the carriage of (non-loaded) motor vehicles, e.g. floating decks.

CAR FERRY

Ships designed for the transportation of motor vehicles (and possibly also passengers) engaged in the ferry service.

3.3.1.3.6 Fishing vessels

FISHING VESSEL

(possibly with supplementary notations for specification of type):
Fishing vessels in accordance with the BRS Construction Rules, Part I, Chapter 8.

3.3.1.3.7 Special-purpose ships

Other types of ships and/or craft which have been specially designed dimensioned and/or equipped for their intended purpose, will have a relevant descriptive notation affixed to their character of classification, such as:

TUG

ICE-BREAKER

SUCTION DREDGER

HYDROFOIL

PILOT BOAT

FLOATING CRANE

RESEARCH VESSEL

SUBMERSIBLE

3.3.1.3.8 Floating docks

The notation affixed to the character of class is

FLOATING DOCK, with indication of the lifting capacity [t].

3.3.1.3.9 Carriage of dangerous cargoes

SOLAS II-2, Reg. 19: Notation in the class certificate assigned to ships equipped for the carriage of dangerous cargoes in accordance with the requirements of the BRS Rules.

3.3.1.3.10 High Speed Craft

HSC-PASSANGER A Notation for craft (up to 450 passengers) meeting the requirements of category A as per IMO-Res. MSC.36(63).

HSC-PASSENGER B Notation for craft (over 450 passengers) meeting the requirements of category B as per IMO Res.MSC.36(63).

HSC-CARGO Notation for ships meeting the structural requirements of IMO Res. MSC.36(63), cargo craft.

Notations for maximum permitted operating conditions expressed in terms of significant

wave height are added to the notations HSC-PASSENGER A, HSCPASSENGER B and HSC-CARGO as follows:

3.3.1.3.11 Yachts exceeding 24 m

CMCA Notation for motor and sailing yachts exceeding 24 m in length **L**, the compliance of which is certified in accordance with "The Code of practice for safety of large commercial sailing & motor vessels".

3.3.1.4 Freeboard

with freeboard ... m The ship's hull is dimensioned for a draught of less than the maximum draught permissible according to the Load Line Convention.

3.3.1.5 Special strengthenings

3.3.1.5.1 Heavy cargo

STRENGTHENED FOR HEAVY CARGO

Notation for ships provided with strengthenings recommended by the Society in accordance with the BRS Construction Rules, unless complying with the requirements of the notations "bulk carrier" or "ore carrier" (cf. 3.3.1.3.2).

3.3.1.5.2 Use of grabs

G Notation for ships with inner bottoms strengthened for the use of grabs in accordance with the BRS Construction Rules.

3.3.1.5.3 Deck loads

Data on permissible deck loads or container weights are recorded in the form of entries in the class certificate, as well as in the approved design documentation.

3.3.1.5.4 Strengthenings for collisions

COLL... The hull side structures are specially strengthened to resist collision impacts as stipulated in the BRS Construction Rules. The index added to the notation (e.g. COLL 2) reflects the degree of strengthening provided.

3.3.1.5.4 Inland vessels

ORE The ship has been dimensioned in accordance with the BRS Construction Rules such as to be able to carry ore or similar cargoes of high density.

Where inland vessels are dimensioned for loading and unloading procedures not in line with normal practice, a relevant entry will be made in the class certificate (cf. Construction Rules for Inland Ships, Chapter 1).

3.3.1.6 Enhanced Surveys

ESP ("Enhanced Survey Programme")
The ship's hull (cargo area) will be surveyed according to an enhanced survey

programme. (Notation for all Oil Tankers, Product Tankers, Chemical Tankers, Bulk Carriers ≥ 500 GRT/GT).

3.3.1.7 In-water surveys

IW The ship's hull is specially equipped for in-water surveys as per BRS Construction Rules for Seagoing ships, Part1, Section 34. See also Section 3, 3.1.7.

3.3.1.8 Bridge design on Seagoing Ships

NAV The bridge is designed in compliance with the Rules.

NAV-O Ocean Area

NAV-OC Ocean Areas and Coastal Waters

3.3.1.9 Dynamic Positioning Systems

DP Notation for ships complying with Rules for "Dynamic Positioning Systems". Depending on the desired system reliability and on the basis of a risk analysis 3 distinctive marks are provided, e.g.:

DP 1 Non-redundant

DP 2 Redundant

DP 3 Redundant, separate compartments

3.3.1.10 Harmony Class

HC (hcn$_{pass}$/hcn$_{crew}$) Notation for ships complying with the Rules for Noise and Vibration for Comfort, Cruise Vessels (v ≤ 25 kn)". To allow for a graduation of noise and vibration, 5 harmony criteria numbers (hcn) are introduced:
hcn = 1 extraordinary comfort (*****) **hcn = 2** excellent comfort (****)
hcn = 3 high comfort (***)
hcn = 4 moderate comfort (**)
hcn = 5 acceptable comfort (*)

Two separate numbers, hcn$_{pass}$and hcn$_{crew}$, reflect the level attained for passenger and crew spaces, respectively. For instance **HC (2/3)** corresponds to and excellent comfort for passengers and high comfort for crew members.

3.3.1.11 Harmony Class

Green Passport Notation for passenger ships fulfilling the requirements for Environmental Service Systems.

3.3.1.12 Special equipment and systems

Special systems (e.g. propulsion systems) or equipment covered by classification may be referred to by a notation affixed to the character of classification, such as:

AHTS The ship has been equipped with an approved additional hatchcover tightness system.

EQUIPPED WITH BOW RUDDER

EC **("Equipment Certified")**

Characteristic implements and/or equipment have by agreement been constructed in accordance with the rules or regulations of and under supervision by BRS.

(This does not apply to the anchor equipment, which is always covered by classification, or to equipment, such as container lashing elements, which according to 1.2.4 above is also in any case covered by classification.)

3.3.1.13 Material

If ships are constructed of mild steel, this will not be specially indicated. If other materials are employed for the entire hull, this will be indicated in the Ship Register and in the class certificate, e.g.:

HIGHER TENSILE STEEL

ALUMINIUM

GRP

Other materials used for structure parts of the hull will be noted into the Class Certificate (-Annex).

3.3.1.14 Novel designs

EXP Ships, machinery installations or essential parts have been constructed in accordance with a design, for which sufficient experience is not available. BRS will decide at what intervals the required periodical surveys will have to be carried out. Where experience over a prolonged period of time has proved the efficiency of the design, the notation EXP may be canceled.

3.3.1.15 Special analysis and survey procedures

RSD **("Rational Ship Design")**

Notation for ships which are subject to special analysis procedures.

The analysis procedures required for the ships hull comprise inter alia the following:

– first principle design procedures by means of e.g. finite element analysis techniques

– additional fatigue strength calculations

– calculation of usage factors and assessment of highly stressed structures

– determination of explicit corrosion margins of structural members

The analysis results will be stored in a data base.

STAR ("System of Traceability and Analysis of Records") The assignment of the notation STAR is only possible in conjunction with the assignment of the notation RSD. The results of surveys will be fed into the data base established within the frame work of RSD and will be analysed and evaluated.

ERS ("Emergency Response Service")

Notation for ships, the geometry and structural data of which are made available in a database to provide the assistance necessary for limiting damages in case of average with the aid of special computer programs.

BMW Notation for ships complying with the "Guidelines on Ballast Water Management". Depending on various handling procedures of the ballast water 3 distinctive marks are provided:

BMW-S Sequential method of exchange

BMW-F Flow through method

BMW-T Biological, chemical or physical treatment method

3.3.2 Machinery (special equipment)

3.3.2.1 Automation

Machinery installations which comply with the Rules of BRS for automated and/or remote-controlled systems, will have the following notations affixed to the character of classification (not applicable if class notations for high-speed craft have been assigned). Other notations for a detailed description are possible.

AUT The machinery installation is fitted with equipment for unattended machinery spaces, so that it does not require to be operated and/ or maintained for periods of at least 24 hours.

AUT-nh The period during which attendance to and maintenance of equipment is not required, is less than 24 hours, with nh indicating that the machinery space may remain unattended for n hours.

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

RC Fishing vessels: The installation is provided with a system for remote control of the main propulsion plant from the bridge.

3.3.2.2 Inert gas systems

INERT The ship is equipped with an inert gas system in accordance with the BRS Construction Rules, or with a system recognized as being equivalent in design.

3.3.2.3 Fire fighting

Ships fitted with equipment complying with the BRS Construction Rules for Fire-Fighting Ships will, depending on the size and purpose of the equipment provided, have one of the following notations affixed to the character of classification for the machinery installation:

FF Equipment for fighting fires in the initial stage including only part of the special systems and equipment.

FF1 Equipment for fighting fires in the initial stage and performing rescue operations in the immediate vicinity of the installation on fire.

FF2 Equipment for sustained fighting of large fires and for cooling parts of the installation on fire.

FF3 Corresponding to FF2, but with greater fire-extinguishing capacity and more comprehensive fire-extinguishing equipment.

FF1/2 or **FF1/3** Equipment corresponding to FF2 or FF3 and additionally suited for rescue operations as per FF1.

3.3.2.4 Ice strengthening

Ice etc. (As notation affixed to the character of classification for the machinery installation:) See 3.3.1.3.

3.3.2.5 Reliquefaction plants (liquefied-gas tankers)

RI Notation affixed to the character of classification for the machinery installation of ships carrying liquefied gases and equipped with systems for cooling (reliquefaction) of their cargo in accordance with the BRS Construction Rules.

3.3.2.6 Redundant Propulsion and Steering Systems

RP1x% The ship has at least two propulsion machines, which are independent or can be separated from each other. This also applies to the auxiliary systems which are needed to operate the propulsion machines. No redundancy of propeller, shaft line, gearbox and steering system is required.

RP2x% The ship has at least two propulsion systems and two steering systems, each of which are independent or can be separated from each other. This also applies to each of the auxiliary systems which are needed to operate the propulsion and/or steering systems.

RP3x% The ship has at least two propulsion systems and two steering systems, each of which are independent or can be separated from each other and are installed in separate compartments. This also applies to the auxiliary systems which are needed to operate the propulsion and/or steering systems.

The additional index x% denotes what percentage of the main propulsion power of the ship is provided by the redundant ship's propulsion system.

3.3.2.7 Novel designs

EXP See 3.3.1.14.

4. CLASSIFICATION OF NEWBUILDINGS

4.1 Application for classification

4.1.1 The written application for classification is to be submitted to BRS (in triplicate) by the

Shipyard or the shipowner, using the form provided by BRS. The order has to be given by the client, who on the basis of the building contract has the duty to observe the Rules of BRS.

4.1.2 Where orders for the production of components are placed with subcontractors, BRS should be advised about it, also indicating the scope of production. The client will be responsible for the observance of the BRS Rules by the subcontractors.

4.1.3 Where the applicant considers particulars already having been approved by BRS (for previous newbuildings) to be used for the classification, this will have to be specifically stated in the application. Amendments to the Construction Rules having been introduced meanwhile shall be taken into account (see 1.1.1).

4.2 Examination of construction particulars

4.2.1 Particulars for examination - construction plans, proofs by computation, details on materials, etc. - are to be submitted to BRS for examination in triplicate in due time prior to commencement of construction, as detailed in the Construction Rules.

The particulars to be submitted in Bulgarian or English language have to contain all details required for examination in accordance with the Construction Rules. BRS reserve the right to request additional information and particulars to be submitted.

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

4.2.3 Any deviations from approved drawings require to be approved by BRS prior to being realized.

4.3 Supervision of construction and trials

4.3.1 General

4.3.1.1 BRS will assess the production facilities and procedures of the shipyard and other manufacturers as to whether they meet the requirements of the Construction Rules. In general, approvals based on such assessments are conditional for acceptance of products subject to testing.

4.3.1.2 Materials, components, appliances and installations subject to inspection are to comply with the relevant rule requirements and be presented for inspection and/or construction supervision by BRS Surveyors, unless otherwise provided as a result of special approvals granted by BRS.

4.3.1.3 For each inspection, an appointment is to be arranged in time with the local BRS representation.

4.3.1.4 In order to enable the Surveyor to fulfilll his duties, he is to be given free access to the ship and the workshop, where parts requiring approval are manufactured, assembled or tested. For performance of the tests required, the shipyard or manufacturers are to give the surveyor every assistance by providing the staff and equipment necessary for such tests.

4.3.2 Supervision of construction

During the phase of construction of a vessel or installation BRS will ensure by surveys and inspections that:

– parts for hull and machinery and/or special equipment requiring approval have been constructed in compliance with the approved drawings and particulars,

– all tests and trials stipulated by the Construction Rules are performed satisfactorily,

– workmanship is in compliance with current engineering standards and/or BRS rule requirements,

– welded parts are produced by qualified welders having undergone tests,

– for components requiring approval test certificates have been presented (the manufacturer will have to ensure that any parts and materials requiring approval will only be delivered and installed, if the appropriate test certificates have been issued; cf. 4.4.1),

– where no individual certificates are required, type-tested appliances and equipment are employed in accordance with rule requirements.

4.3.3 Tests at manufacturers

As far as practicable, machinery and equipment will be subjected to operational trials on the manufacturers' test bed to the scope specified in the Construction Rules. This applies also to engines produced in large series. Where the machinery, equipment or electrical installations are novel in design or have not yet sufficiently proved their efficiency under actual service conditions on board ship, BRS may require performance of a trial under particularly severe conditions.

(For refrigerating installations, see 4.3.5.)

4.3.4 Shipboard trials

Upon completion of the ship and/or the system/ equipment to be classed, all hull, machinery and electrical installations will be subjected to operational trials in the presence of the BRS Surveyor, prior to and during the sea trial. This will comprise, e.g.:

– tightness, operational and load tests of tanks, hatch covers, shell ports, ramps, etc.,

– operational and/or load tests of the machinery and installations (propulsion plant, electrical installations, steering gear, anchor equipment, etc.) of importance for safe operation.

During a final survey, checks will be made to ensure that any deficiencies found, for instance during the sea trial, have been eliminated. Yachts/small watercraft: See 6.

4.3.5 Refrigerating installations

4.3.5.1 Refrigerating machines are to be subjected to operational tests at manufacturers.

4.3.5.2 Fitting of the refrigerating installation will be supervised by the Surveyor, who will examine the workmanship and perform the prescribed tightness and operational tests.

4.3.5.3 Upon completion the entire installation will be subjected to operational trials in accordance with the requirements of the Construction Rules.

4.3.5.4 For refrigerating installations deviating in design from installations in common use, BRS reserve the right to require additional tests to be performed, schedule special survey dates and make

special entries in the refrigerating installation certificate and in the Register Book.

4.4 Reports, certificates

4.4.1 Testings of materials, components, machinery, etc. at subcontractor's works will be certified by the Surveyor and/or the local BRS representation.

4.4.2 After completion of the ship or installation the Surveyors will prepare construction reports, on the basis of which BRS will issue the class certificate (cf. 1.3).

5. ADMISSION TO CLASS

5.1 Order, particulars

5.1.1 Order

5.1.1.1 Order for the classification of ships or special equipment not constructed under the supervision of BRS are to be addressed to BRS in writing, in triplicate. The order for classification is to be accompanied at least by the particulars specified in 5.1.2 below. BRS reserve the right to request submission of additional particulars.

Yachts/small watercraft: See 6.

5.1.1.2 BRS is to be informed about the previous class and class period, as well as any recommendations imposed by the previous Classification Society.

5.1.2 Particulars - hull and machinery[4]

– particulars of the type and main dimensions of the ship, building year, building yard, free-board, stability documentation and details of the anchor equipment

– particulars of the type, output and main data, building year and manufacturer of the main engine(s) and of the auxiliary machinery essential for operational safety, the electrical installations, the inert gas system, the safety arrangements, the steering gear and the wind-lasses

– general arrangement capacity plan, hydrostatic and cross curves, loading manual, where required, midship section, longitudinal and transverse sections, transverse bulkheads, decks, shell expansion, engine and boiler foundations, stem and stern frame, rudder and rudder stock, hatch covers

– machinery arrangement, intermediate, thrust and screw shafts, propeller, main engines, propulsion gears and clutch systems, starting air receivers, main and/or auxiliary boilers and oil fuel burning systems, turbines, superheaters and economisers (or manufacturer make, model and rating information)

– steam and feed-water systems, cooling water and lubricating oil systems, bilge and ballast systems, fuel oil and starting-air systems, air and sounding pipes systems, electrical ar-rangements and wiring diagram steering gear system piping and arrangements and steering gear manufacturer make and model information

[4] BRS reserve the right to reduce or increase the scope of particulars depending on recognizing of the previous Classification Society.

– for vessels less than two years old: torsional vibration calculations are to be submitted

– for vessels with ice class notation: drawings for flexible couplings and/or torque limiting shafting devices in the propulsion line shafting (or manufacturer make, model and rating information)

– for tankers: tank bulkheads, loading and unloading facilities, cargo tank venting system and safety devices, pumping arrangements at the forward and after ends of the vessel, drainage of cofferdams and pump rooms

– for unattended machinery spaces, notation (AUT): instrument and alarm list, fire alarm system, list of automatic safety functions (e.g. slowdowns, shutdowns, etc.), function testing plan

– for ships with built-in tanks, the walls of which do not form part of the shell plating: drawings of these tanks, their safety arrangement, as well as their loading and unloading systems.

5.1.3 Particulars - special equipment (refrigerating installations, diving systems) [4]

The application for classification for special equipment (refrigerating installations, diving systems) is to be accompanied by particulars in the extent as indicated in the Construction Rules. Results of the trials under working conditions are to be submitted; if an operational trial has not as yet been performed, it will have to be carried out.

5.2 Performance of Admission to class

5.2.1 The drawings and other particulars of relevance to classification are checked for compliance with the applicable BRS Construction Rules and/or equivalent other rules.

5.2.2 For admission to class the extent of the classification survey for the hull and machinery installation respectively her special equipment will be especially determined by BRS depending on the vessel's age and type, e.g. tankers (ESP) over 20 years a full special survey (or intermediate) is to be carried out, which is due first. If the result of the survey is satisfactory, the class of BRS will be effective as of the date of performance of the survey.

5.2.3 If the ship and/or her special equipment hold the class of another recognized Classification Society and if sufficient proof has been furnished regarding the class status, BRS may dispense with the examination of drawings and computations. The scope of the particulars (hull and machinery) has to be agreed by BRS Head Office.

In such cases, the period of class will remain as assigned by the previous Classification Society.

5.2.4 A ship will not be admitted to class if the relevant drawings and computations are not submitted.

5.2.5 If the ship complies with the requirements of BRS, a class certificate will be issued in accordance with the Surveyor's report on the condition of the ship. Once a ship and/or her equipment have been classed with BRS, the regulations applicable to ships and/or special equipment constructed under supervision by BRS will apply analogously.

5.2.6 If a sufficient proof of the loosing society regarding the ship's previous class status is not as yet available the survey status information provided by Owner may be used. An "Interim Class Certificate" may be issued after completion of the surveys requested for admission to class with a statement that recommendations which are overdue, if received after issuance of the Interim Class

Certificate are to be dealt with at the next port of call.

6. CLASSIFICATION OF YACHTS AND SMALL WATER CRAFT FROM 6 TO 24 M IN LENGTH

6.1 General requirements

6.1.1 Watercraft built and equipped in accordance with the Construction Rules of BRS - Part 3, "Pleasure Craft" - will be assigned BRS class upon application.

6.1.2 The general requirements as per 1 to 5 are to be applied, as far as applicable to this type of craft, and unless stated otherwise in the following.

6.1.3 Classification covers the hull, the machinery, including the electrical installation, the hull equipment, the closures and if needed the rigging, as defined in the Rules.

Components and equipment not dealt with in the Rules are not subject to examination within the scope of classification. (Responsibility for compliance with any existing flag state regulations rests with the owner).

6.1.4 BRS reserve the right to also classify craft made of materials, for which no special BRS Rules exist, provided that proof of suitability of these materials has been furnished.

6.1.5 Sporting craft and comparable craft, partly or predominantly serving commercial purposes, may additionally be subject to rules having to be observed beyond the BRS Construction Rules.

6.1.6 Watercraft built under BRS construction supervision of a current series[5] may be classed, if the application for classification is made prior to commencement of construction, provided the relevant surveys and trials do not give cause for objections.

6.2 Characters of classification and notations

6.2.1 Characters of classification

6.2.1.1 Hull

The character of classification for the hull is

BR 100 A5, if the hull was constructed under supervision by BRS, with additional notations as per 6.2.2.

Apart from this, 3.2 is to be applied.

6.2.1.2 Machinery

For water craft with a total propulsion machinery output of more than 300 kW a class certificate for the machinery (including the electrical installation) will be issued, in addition to the hull certificate.

[5] See special Rules "Series construction supervision of sporting craft made of fibre-reinforced resins and other special materials"

The character of classification for the machinery is

BR MC Y, if the machinery was manufactured under supervision by BRS.

For water craft with a propulsion machinery output of up to 300 kW, any comments on surveys of the machinery installation will be entered into the hull certificate.

6.2.2 Notations affixed to the character of classification

6.2.2.1 Ranges of service

Water craft meeting the requirements of the Construction Rules for a restricted range of service only will be assigned the following notations affixed to the character of classification characterizing the range of service (I, II, III, IV, V).

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

Range of service I

Unrestricted trade far away from coastlines, during which a vessel entirely left to its own devices has to be in a position to cope with emergency situations for prolonged periods, without relying on outside assistance.

Range of service II

Voyages along the coastline, but restricted to a sea area located at a distance not exceeding 200 nautical miles, measured from the main land[6] and / or from off-shore islands situated at a distance not exceeding 400 nautical miles from the main land and/or from another island.

Range of service III

Voyages along the coastline confined to a sea area located at a distance of 20 nautical miles, measured from the main land[6], and/or from offshore islands situated at a distance not exceeding 40 nautical miles from the main land and/or from another island.

Range of service IV

Day trips between close ports along the coastline within a relatively protected area. However, voyages are restricted to a sea area located at a distance not exceeding 3 nautical miles, measuring from the main land[6], and/or from offshore islands situated at a distance not exceeding 6 nautical miles from the main land and/or from another island.

Range of service V

Trips on inland waterways and lakes. Also included: Day trips off the coastline, confined to shallows and/or sea areas located at a distance not exceeding 0.75 nautical miles, measured from the shore and/or the main land[6].

[6] Coastline measured at mean high water

6.2.2.2 Designation of types and use

6.2.2.2.1 In addition to the character of class, water craft will be characterized by notations affixed, describing their type and envisaged use, as shown in the following examples.

6.2.2.2.2 Sporting craft

SAILING YACHT

MOTOR SAILER

MOTOR YACHT

HIGH SPEED MOTOR YACHT

SPECIAL SAILING YACHT SPECIAL MOTOR YACHT

RACING YACHT

Note: The term "special" applies to yachts of unusual shape/dimensions and with special technical equipment, if any. BRS reserve the right of determining whether the Society's Rules are applicable and how they are to be interpreted.

6.2.2.2.3 Yachts for commercial purposes

TRAINING SAILING/MOTOR YACHT

CHARTER SAILING/MOTOR YACHT

These notations are applicable, where the main structural elements comply with the Construction Rules for the type of craft listed under 6.2.2.2.4.

6.2.2.2.4 Watercraft used for commercial purposes or by authorities

Craft complying with the pertinent Construction Rules of BRS, may be assigned the following notations affixed to the character of classification, e.g.:

FISHING VESSEL, see also 3.3.1.3.6

PATROL BOAT

WORK BOAT

6.3 Approval and survey of newbuildings

6.3.1 Regarding applications for classification and the particulars to be submitted, the regulations in 4 apply analogously. The documents to be submitted for approval shall include drawings and calculations of the rigging.

6.3.2 Qualification of the workshop

6.3.2.1 Regarding the processing of metallic materials and the manufacture of machinery installations and components, the materials and welding Rules of BRS apply (see also 4.3.1.1).

6.3.2.2 Regarding facilities, quality control, production procedures and skills of the personnel, workshops producing sporting craft of fibre-reinforced reaction resins and other non-metallic special materials have to be suited for the work carried out by them. This suitability will be certified by a relevant workshop approval. In general apply the BRS Rules for nonmetallic materials.

6.3.3 Construction supervision: see 4.3.2

6.3.4 Trials

The craft having been completed, all equipment of the hull, the machinery and electrical installation and the sailing equipment will be tested in operation during a sea trial, in the BRS Surveyor's presence.

6.3.5 Marking

Water craft constructed in accordance with the BRS Construction Rules will be marked with a label which will continue to be valid as long as the structural conditions remain unchanged. The label is valid only in connection with the pertinent Class Certificate.

(cf.2., Validity of class).

6.4 Admission to class

6.4.1 The general regulations in 5 are, as far as applicable, to be applied analogously, with the following additions to be observed.

6.4.2 Vessels constructed under supervision by a recognized Classification Society are to be presented for survey in drydock. The machinery and electrical installations are to be subjected to an operational trial. BRS will fix the scope of surveys, depending on the vessel's age, maintenance condition, intended use and on the informative value of the documents received.

6.4.3 Vessels not constructed under the supervision of a recognized Classification Society are excluded from classification, if their hulls consist of fibre-reinforced plastic materials or ferro-cement. For other vessels previously not classified, within the scope of classification a complete examination of drawings is required to the extent stipulated for new-buildings. Beyond this, surveys are to be conducted (onshore) for assessment of compliance with the drawings and documentation, as well as trials/function tests to be determined from case to case.