DNV·GL

RULES FOR CLASSIFICATION

Ships

Edition October 2015

Part 1 General regulations

Chapter 2 Class notations

DNV GL AS

FOREWORD

DNV GL rules for classification contain procedural and technical requirements related to obtaining and retaining a class certificate. The rules represent all requirements adopted by the Society as basis for classification.

Any comments may be sent by e-mail to *rules@dnvgl.com*

CHANGES – CURRENT

This is a new document.

The rules enter into force 1 January 2016.

CONTENTS

SECTION 1 CLASS NOTATIONS

1 General

1.1 Introduction

1.1.1 All vessels classed with the Society may be assigned

— construction symbol
— main class notation
— ship type notation
— additional Class Notation
— service area notation

as applicable.

1.1.2 Class notations are assigned in order to determine applicable rule requirements for assignment and retention of class. Applicable class notations are given in Sec.2 to Sec.5.

1.1.3 Class notations are either mandatory or optional. The mandatory class notations are indicated in the Tables given in Sec.2 to Sec.5.

1.1.4 In accordance with Ch.1 Sec.1 [2.2.5] optional class notations from the Society's other rule books may, upon special consideration, be assigned to a vessel complying with those rules.

1.1.5 Class notations may be given one or more qualifiers which are supplementary symbols used to identify variants of the class notation or a design parameter. Qualifiers typically denote differences in levels of complexity and/or special requirements or limitations, and may be assigned additional requirements.

Qualifiers follow immediately after a class notation and are indicated in parenthesis. Multiple qualifiers are separated by comma and space.

1.1.6 Class notations and qualifiers are shown in **bold**. See Table 1 for examples of class notations and qualifiers.

1.1.7 The Tables in Sec.2 to Sec.5 include the following information:

— name of class notation
— indication of class notation being mandatory
— reference to design requirements*
— reference to survey requirements for Fleet in Service (FiS)*)
— qualifiers as relevant
— purpose of class notation
— application, giving additional information on when and/or where a class notation can be applied and/or under what condition a class notation is mandatory.

* NA indicates no requirements.

1.1.8 Examples of typical class notations are shown in Table 1.

Table 1 Examples of class notations

	Example 1	*Example 2*	*Example 3*
Construction symbol (see Sec.2 [1])	✠	✠	✠
Main Class Notation (see Sec.2 [2])	**1A**	**1A**	**1A**
Ship type notations (see Sec.3)	**Container ship**	**Tanker for oil**	**Offshore service vessel(Supply)**
Additional Class Notations (see Sec.4):			
Related to structural strength and integrity		**CSR**	**Strengthened(DK)**
Related to propulsion, power generation and auxiliary systems	**E0**	**E0**	**E0**
Related to navigation and manoeuvring	**NAUT(AW, ICS)**		**NAUT(OSV)**
Related to cargo operation	**RSCS**	**Bow loading**	
Related to equipment and design features	**DG**		**LFL HELDK(S, H) SF**
Related to cold climate	**Ice(E)**		**Ice(1A) Winterized(Basic)**
Related to environmental protection and pollution control	**Clean**		**Clean(Design)**
Related to survey arrangement	**BIS TMON**	**ESP TMON**	

SECTION 2 CONSTRUCTION SYMBOL AND MAIN CLASS NOTATION

1 Construction symbols

1.1 General

1.1.1 The construction symbol ✠ will be assigned to vessels built under the supervision of the Society.

1.1.2 The construction symbol ✠ will be assigned to vessels built under the supervision of a classification society recognized by the Society and later assigned class with the Society. For such vessels the class notations which the Society considers to have the equivalent intent will be assigned.

1.1.3 Vessels other than those described in [1.1.1] and [1.1.2] will not be assigned a construction symbol when classed with the Society.

2 Main Class Notation

2.1 General

2.1.1 The main class notation **1A** will be assigned to vessels with hull, machinery, systems and equipment found to be in compliance with applicable rule requirements as given in Pt.2, Pt.3 and Pt.4.

2.1.2 The main class notation **1A** will also be assigned to vessels designed and constructed in accordance with the rules of another classification society, and later assigned class with the Society.

SECTION 3 SHIP TYPE NOTATIONS

1 Introduction

1.1 General

1.1.1 Vessels that comply with requirements defined in Pt.5 may be given a ship type notation as indicated in Table 1 to Table 13 of this section.

1.1.2 A vessel may be assigned more than one ship type notation provided that the respective requirements are met.

1.1.3 Certain ship type notations are mandatory based on e.g.:

— type of cargo
— number of passengers
— the ability to execute special operations.

2 Dry cargo ships

Table 1 Ship type notations for dry cargo ships

Class Notation	*Qualifier*	*Purpose*	*Application*
General dry cargo ship Mandatory: Yes Design requirements: Pt.5 Ch.1 Sec.5 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Carriage of unitized and dry bulk cargo	Mandatory for ships occasionally carrying dry cargo in bulk, unless ship type notation **Multi-purpose dry cargo ship** is assigned
Multi-purpose dry cargo ship Mandatory: Yes Design requirements: Pt.5 Ch.1 Sec.5 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Carriage of unitized and dry bulk cargo	Mandatory for ships occasionally carrying dry cargo in bulk, unless ship type notation **General dry cargo ship** is assigned

Class Notation	*Qualifier*	*Purpose*	*Application*
Bulk carrier Mandatory: Yes Design requirements: Pt.5 Ch.1 Sec.6 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Carriage of dry bulk cargo	Mandatory for sea-going single deck ships with cargo holds of single and/or double side skin construction, with a double bottom, hopper side tanks and top-wing tanks fitted below the upper deck, and intended for the carriage of solid bulk cargoes
Ore carrier Mandatory: Yes Design requirements: Pt.5 Ch.1 Sec.7 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Carriage of ore cargo in dry bulk	Mandatory for sea-going single deck ships having two longitudinal bulkheads and a double bottom throughout the cargo region, and intended for carrying ore cargoes in the centre hold only
X carrier Mandatory: Yes Design requirements: Pt.5 Ch.1 Sec.8 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Specialised for the carriage of a single type of dry bulk.	Mandatory unless ship type notation **Bulk carrier** is assigned. X denotes type of bulk cargo to be carried, limited to either, **Woodchips**, **Cement**, **Fly ash**, or **sugar**
Great lakes bulk carrier Mandatory: Yes Design requirements: Pt.5 Ch.1 Sec.9 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Carriage of dry bulk cargo	Designed to operate within the limits of the Great Lakes and St. Lawrence river to the seaward limits defined by the Anticosti Island

3 Container ships

Table 2 Ship type notation for container ships

Class Notation	*Qualifier*	*Purpose*	*Application*
Container ship Mandatory: Yes Design requirements: Pt.5 Ch.2 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Carriage of containers	Ships exclusively intended for the carriage of containers. Carriage of break bulk on inner bottom may be accepted in special cases.

4 RO/RO ships

Table 3 Ship type notations for RO/RO ships

Class Notation	*Qualifier*	*Purpose*	*Application*
RO/RO ship Mandatory: No Design requirements: Pt.5 Ch.3 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Loading and unloading the cargo by Roll on/ Roll off (RO/RO)	
Car carrier Mandatory: No Design requirements: Pt.5 Ch.3 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Carriage of vehicles	

5 Passenger ships

Table 4 Ship type notations for passenger ships

Class Notation	*Qualifier*	*Purpose*	*Application*
Passenger ship Mandatory: Yes Design requirements: Pt.5 Ch.4 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Carriage of passenger	More than 12 passengers
Ferry Mandatory: Yes Design requirements: Pt.5 Ch.4 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	**A**	Carriage of passengers and vehicles.	More than 12 passengers and vehicles on enclosed decks
	B	Carriage of passengers and vehicles.	More than 12 passengers and vehicles on weather decks only. Requires service area restriction **R2** or stricter

6 Oil tankers

Table 5 Ship type notations for oil tankers

Class Notation	*Qualifier*	*Purpose*	*Application*
Tanker for oil Mandatory: Yes Design requirements: Pt.5 Ch.5 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Carriage of oil in bulk	For carriage of oil
Tanker for oil products Mandatory: Yes Design requirements: Pt.5 Ch.5 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Carriage of oil products in bulk	For carriage of all oil products except crude oil

Class Notation	Qualifier	Purpose	Application
Bulk carrier or tanker for oil Mandatory: Yes Design requirements: Pt.5 Ch.1 Sec.3 Pt.5 Ch.5 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Carriage of dry bulk cargo alternating with carriage of oil	Combination carrier

7 Chemical tankers

Table 6 Ship type notations for chemical tankers

Class Notation	Qualifier	Purpose	Application
Tanker for c Mandatory: Yes Design requirements: Pt.5 Ch.6 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Carriage of specific type of liquid chemical. "c" denotes the type of cargo for which the ship is Classed.	Chemical carriers according to the IBC or BHC code. Cargoes not requiring full compliance with Pt.5 Ch.6 Sec.1 to Sec.14.
Tanker for chemicals Mandatory: Yes Design requirements: Pt.5 Ch.6 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Carriage of chemicals	Chemical carriers with cargos listed in the IBC code Ch.17 and Ch.18 with additions given in IMO MEPC.2/Circ. XX List 1.

8 Liquefied gas tankers

Table 7 Ship type notation for liquefied gas tankers

Class Notation	*Qualifier*	*Purpose*	*Application*
Tanker for liquefied gas Mandatory: Yes Design requirements: Pt.5 Ch.7 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Carriage of liquefied gas	

9 Compressed gas tankers

Table 8 Ship type notation for compressed gas tankers

Class Notation	*Qualifier*	*Purpose*	*Application*
Tanker for compressed natural gas Mandatory: Yes Design requirements: Pt.5 Ch.8 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Carriage of compressed natural gas	

10 Offshore service vessels

Table 9 Ship type notations for offshore service vessels

Class Notation	*Qualifier*	*Purpose*	*Application*
Offshore service vessel Mandatory: No Design requirements: Pt.5 Ch.9 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, Pt.7 Ch.1 Sec.4, and Pt.7 Ch.1 Sec.6 [34]	<None>	For vessels providing services for offshore installations	
	+	For services in harsh weather conditions	
	Anchor handling	Towing of floating objects and handling of anchoring equipment	
	Towing	Towing floating objects in open waters	
	Supply	Platform Supply services	
	AHTS	Towing of floating objects, handling of anchoring equipment, and platform supply services	Compliance with**Anchor handling**, **Towing** and **Supply**
	Windfarm maintenance	Maintenance and service of offshore wind farms	
Standby vessel Mandatory: No Design requirements: Pt.5 Ch.9 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Rescue operations and standby services	
	S	Rescue operations and standby services in harsh weather conditions	

11 Vessels for special operations

Table 10 Ship type notations for vessels for special operations

Class Notation	*Qualifier*	*Purpose*	*Application*
Crane vessel Mandatory: No Design requirements: Pt.5 Ch.10 Sec.2 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, Pt.7 Ch.1 Sec.4, and Pt.7 Ch.1 Sec.6	<None>	Crane operations	
Cable laying vessel Mandatory: No Design requirements: Pt.5 Ch.10 Sec.3 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Cable laying	
Pipe laying vessel Mandatory: No Design requirements: Pt.5 Ch.10 Sec.4 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Pipe laying	
Semi–submersible heavy transport vessel Mandatory: Yes Design requirements: Pt.5 Ch.10 Sec.5 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Carriage of heavy unitized dry cargo	Designed to load and unload deck cargo by temporarily submerging its cargo deck through ballast operations

Class Notation	*Qualifier*	*Purpose*	*Application*
Diving support vessel Mandatory: No Design requirements: Pt.5 Ch.10 Sec.6 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Diving support operations	
	SAT	Diving support operations with no operating restrictions	
	Surface	Diving support operations with operating restrictions to maximum depth of 60 m and operating time 8 hr	
Seismic vessel Mandatory: No Design requirements: Pt.5 Ch.10 Sec.7 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Seismographic research	Requirements to hull arrangement and strength
	A	Seismographic research	Requirements to systems and equipment
Well stimulation vessel Mandatory: No Design requirements: Pt.5 Ch.10 Sec.8 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Well stimulation	
Fire fighter Mandatory: No Design requirements: Pt.5 Ch.10 Sec.9 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Fire fighting	
	I	Fire fighting with active protection, giving it the capability to withstand higher heat radiation loads from external fires	
	I+	Fire fighting with active and passive protection, giving it the capability to withstand the higher heat radiation loads also when the active protection fails. In addition, the vessel incorporates a longer throw length	
	II	Continuous fire fighting of large fires and cooling of structures. Can be assigned in combination with **Fire fighter (I)**	

Class Notation	*Qualifier*	*Purpose*	*Application*
	III	Continuous fire fighting of large fires and cooling of structures with larger water pumping capacity and more comprehensive fire fighting equipment than for II. Can be assigned in combination with **Fire fighter (I)**	
	Capability	Fire fighting capability	Vessels not specifically built for fire fighting purpose but for which have special fire fighting capabilities in addition to their regular service.
Icebreaker Mandatory: No Design requirements: Pt.5 Ch.10 Sec.10 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Ice breaking	
Tug Mandatory: No Design requirements: Pt.5 Ch.10 Sec.11 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Towing of other vessels by towlines	
	Escort(Fs, t, v)	Steering and manoeuvring operations of other vessels by towlines	**Fs** indicates maximum transverse steering pull in ton, exerted by the escort tug on the stern of the assisted vessel, **t** is the time required for the change of the tug's position from one side to the corresponding opposite side, and **v** is the speed at which this pull may be attained
Dredger Mandatory: No Design requirements: Pt.5 Ch.10 Sec.12 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Dredging	
	Suction	Suction dredging	

Class Notation	Qualifier	Purpose	Application
Pusher Mandatory: No Design requirements: Pt.5 Ch.10 Sec.13 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Pushing	

12 Non-self-propelled vessels

Table 11 Ship type notations for non-self-propelled vessels

Class Notation	Qualifier	Purpose	Application
Barge Mandatory: Yes Design requirements: Pt.5 Ch.11 Sec.2 FiS survey requirements: Pt.7 Ch.1 Sec.2, and Pt.7 Ch.1 Sec.4	<None>	Vessels with cargo hold	No means of self-propulsion for transit
	Hopper	Vessels for dredging operations with self-unloading through the bottom	
	Concrete	Vessels made of concrete and with cargo hold	
Pontoon Mandatory: Yes Design requirements: Pt.5 Ch.11 Sec.3 FiS survey requirements: Pt.7 Ch.1 Sec.2, and Pt.7 Ch.1 Sec.4	<None>	Vessels without cargo hold	No means of self-propulsion for transit

13 Fishing vessels

Table 12 Ship type notations for fishing vessels

Class Notation	*Qualifier*	*Purpose*	*Application*
Fishing vessel Mandatory: No Design requirements: Pt.5 Ch.12 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Fishing	
	S	Arranged for carriage of fish in bulk, with shifting boards in cargo holds	
	N		**Fishing vessel** complying with the requirements of the Norwegian Maritime Directorate (NMD)
Stern trawler Mandatory: No Design requirements: Pt.5 Ch.12 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Fishing	Stern trawling
	S	Arranged for carriage of fish in bulk, with shifting boards in cargo holds	
	N		**Fishing vessel** complying with the requirements of the Norwegian Maritime Directorate (NMD)

14 Naval vessels

Table 13 Ship type notations for naval and naval support vessels

Class Notation	*Qualifier*	*Purpose*	*Application*
Naval Mandatory: Yes Design requirements: Pt.5 Ch.13 Sec.3 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Naval operations	Naval flagged vessels and administered by a national naval administration
Naval landing craft Mandatory: Yes Design requirements: HSLC/NC Pt.5 Ch.13 Sec.3 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	For vessels intended to carry troops, vehicles and equipment combined with beach landing operations.	Naval flagged vessels and administered by a national naval administration L_{pp}<40 m

SECTION 4 ADDITIONAL CLASS NOTATIONS

1 Introduction

1.1 General

1.1.1 Vessels that comply with the requirements provided in Pt.6 may be assigned corresponding additional class notation as indicated in Table 1 to Table 11 of this section.

1.1.2 Certain additional class notations are mandatory for certain types of installation, features, or equipment installed; (e.g. **Bow loading**, **Battery(Power)**, **Inert**) where the Society has found that these constitute possible hazards to personnel and/or the vessel. Mandatory additional class notations are indicated in the tables referred below.

Additional class notations made mandatory for different ship types are also referred in Pt.5.

2 Structural strength and integrity

Table 1 Additional class notations related to structural strength and integrity

Class Notation	*Qualifier*	*Purpose*	*Application*
Grab Mandatory: Yes Design requirements: Pt.6 Ch.1 Sec.1 FiS survey requirements: NA	**1-X**	Strengthened inner bottom for grab loading and unloading with grab mass **X** ≥20 t	Mandatory for ships with class notation **HC(M)**, and Mandatory for ships with freeboard length L_{LL} > 150 m and carrying solid bulk cargoes having a density ≥1.0 t/m^3, unless **Grab (2-X)** or **Grab (3-X)** is assigned
	2-X	Strengthened inner bottom, and lower part of transverse bulkhead for grab loading and unloading with grab mass **X** ≥20 t	
	3-X	Strengthened inner bottom, and lower part of transverse bulkhead and longitudinal bulkhead for grab loading and unloading with grab mass **X** ≥20 t	Mandatory for **Ore carrier** with class notation **OC(M)** or **OC(H)** Mandatory for ships with class notation **HC(A)**, **HC(B)**or **HC(B*)**
Strengthened Mandatory: No Design requirements: Pt.6 Ch.1 Sec.2 FiS survey requirements: NA	**HA**	Weather deck hatch covers strengthened for heavy cargo	
	DK	Weather deck strengthened for heavy cargo	
	IB	Inner bottom strengthened for heavy cargo	

Class Notation	*Qualifier*	*Purpose*	*Application*
HL Mandatory: No Design requirements: Pt.6 Ch.1 Sec.3 FiS survey requirements: NA	**ρ**	Tanks or holds strengthened for heavy liquid, where ρ denotes the maximum density in t/m^3 in specified cargo tanks	
HC Mandatory: Yes Design requirements: Pt.6 Ch.1 Sec.4 FiS survey requirements: NA	**A**	Strengthened to carry dry bulk cargoes of density ≥ 1.0 t/m^3 with specified holds empty at scantling draught, in addition to **HC(B)**.	**HC** with one of qualifiers **AB**, **B*C** or **M** are mandatory for: — **General dry cargo ship** designed for carriage of solid bulk cargoes, with *L* ≥ 150 m, having minimum five cargo holds — **Multi-purpose dry cargo ship** designed for carriage of solid bulk cargoes, with *L* ≥ 150 m, having minimum five cargo holds — **Bulk carrier** without **CSR** notation, with *L* ≥ 150 m
	B	Strengthened to carry dry bulk cargoes of density ≥ 1.0 t/m^3 with all holds loaded, in addition to **HC(C)**.	
	B*	Strengthened to carry dry bulk cargoes of density ≥ 1.0 t/m^3 with any hold empty at scantling draught	
	C	Strengthened to carry dry bulk cargoes of density< 1.0 t/m^3	
	M	Designed to carry dry bulk cargoes as described in the loading manual	
Maximum cargo density Mandatory: Yes Design requirements: Pt.6 Ch.1 Sec.4 and CSR Ch.1 Sec.1 FiS survey requirements: NA	**ρ**	Designed for a maximum cargo density ρ in t/m^3.	Mandatory for ships with class notation **BC(A)**, **BC(B)**, **HC(A)HC(B)** or **HC(B*)**designed for a maximum cargo density < 3.0 t/m^3
No MP Mandatory: No Design requirements: Pt.6 Ch.1 Sec.4 and CSR Ch.1 Sec.1 FiS survey requirements: NA	<None>	Ships not designed for loading and unloading in multiple ports	

Class Notation	*Qualifier*	*Purpose*	*Application*
OC Mandatory: Yes Design requirements: Pt.6 Ch.1 Sec.5 FiS requirements: NA	**M**	Strengthened for loading and unloading in multiple ports, in addition to **OC(H)** notation	Mandatory for ships with class notation **Ore carrier** with $L \geq 150$ m, unless **OC(H)** is assigned
	H	Designed to carry ore cargoes in seagoing homogeneous loading conditions	Mandatory for ships with class notation **Ore carrier** with $L \geq 150$ m, unless **OC(M)** is assigned
Holds n may be empty Mandatory: Yes Design requirements: Pt.6 Ch.1 Sec.4 and Pt.6 Ch.1 Sec.5, and CSR Ch.1 Sec.1 FiS survey requirements: NA	<None>	Holds may be empty at maximum draught (for **OC(M)** maximum draught among the seagoing loading conditions in the loading manual) where **n** is the identification number for each hold that may be empty	Mandatory for ships with class notation **BC(A)**, **HC(A)**, **HC(M)**, if alternate loading conditions are included in the loading manual, or **OC(M)**
Plus Mandatory: No Design requirements: Pt.6 Ch.1 Sec.6 FiS survey requirements: NA	<None>	Extended scope of fatigue strength assessment for hull structural details	
CSA Mandatory: No Design requirements: Pt.6 Ch.1 Sec.7 FiS requirements: NA	**1**	Fatigue strength control in accordance with **CSA(FLS1)** and ultimate strength check based on direct load calculations	
	2	Fatigue strength control in accordance with **CSA(FLS2)** and ultimate strength check based on direct load calculations	
	FLS1	Fatigue strength control based on direct load calculations	
	FLS2	Additional fatigue strength control based on direct load calculations with increased scope compared to **CSA(FLS1)**	

Class Notation	*Qualifier*	*Purpose*	*Application*
RSD Mandatory: Yes Design requirements: Pt.6 Ch.1 Sec.8 FiS requirements: NA	<None>	Structure strength is verified by means of global finite element assessments	Mandatory for vessels with class notation **Container ship** having one of the following characteristics: — novel design — complex structural arrangement — *L*≥330m — B≥47m — v≥25kn — hatch coaming built of VL D47 or VL E47 steel grades.
COAT-PSPC Mandatory: No Design requirements: Pt.6 Ch.1 Sec.9 FiS survey requirements: Pt.7 Ch.1 Sec.6,	**X**	Additional requirements for corrosion prevention of tanks and spaces/areas for newbuildings. The notation provides compliance with SOLAS Ch.II-1 Pt.A-1, Reg. 3-2 and IMO Res. MSC.215(82), SOLAS Ch.II-1, Reg. 3-11 and IMO Res. MSC.288(87).	The **X** denotes: **B** requirements for dedicated seawater ballast tanks of all types of vessels **C** requirements for cargo oil tanks of crude oil tankers **D** requirements for double side-skin spaces of bulk carriers **V** requirements for void spaces of bulk carriers and oil tankers
COLL Mandatory: No Design requirements: Pt.6 Ch.1 Sec.10 FiS survey requirements: NA	**X**	Hull side structures specially evaluated for collision impacts	The qualifier **X** shall be an integral number between 1 and 6 and denotes the amount of strengthening of the side structures against collisions
WIV Mandatory: No Design requirements: Pt.6 Ch.1 Sec.11 FiS survey requirements: NA	<None>	Fatigue and ultimate hull girder strength verified under explicit consideration of wave induced vibrations (Whipping and Springing)	**Container ship**

Guidance note:

L is the rule length as defined in Pt.3 Ch.1 Sec.4

---e-n-d---of---g-u-i-d-a-n-c-e---n-o-t-e---

Table 2 Additional class notations related to vessels in accordance with IACS common structural rules only

Class Notation	*Qualifier*	*Purpose*	*Application*
CSR Mandatory: Yes Design requirements: IACS Common Structural Rules Pt.1 Ch.1 Sec.1 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Vessel designed and built according to IACS common structural rules.	Mandatory for: **Bulk carrier** with $L \geq 90$ m and cross section in accordance with CSR Pt.1 Ch.1 Sec.1 [1.2.1] **Tanker for oil**, **Tanker for oil products**, with $L \geq 150$ m
BC Mandatory: Yes Design requirements: IACS Common Structural Rules Pt.1 Ch.1 Sec.1 FiS survey requirements: NA	**A**	Strengthened to carry dry bulk cargoes of density ≥ 1.0 t/m^3 with specified holds empty at scantling draught, in addition to **BC(B)**.	Mandatory for ships with class notation **Bulk carrier** with $L \geq 150$ m, unless **BC(B)** or **BC(C)** is assigned.
	B	Strengthened to carry dry bulk cargoes of density ≥ 1.0 t/m^3 with all holds loaded, in addition to **BC(C)**.	Mandatory for ships with class notation **Bulk carrier** with $L \geq 150$ m, unless **BC(A)** or **BC(C)** is assigned.
	C	Strengthened to carry dry bulk cargoes of density< 1.0 t/m^3	Mandatory for ships with class notation **Bulk carrier** with $L \geq 150$ m, unless **BC(A)** or **BC(B)** is assigned.
Grab Mandatory: Yes Design requirements: IACS Common Structural Rules Pt.1 Ch.1 Sec.1 FiS survey requirements: NA	**X**	Strengthened for grab loading and discharging with grab mass **X** ≥ 20 t	Mandatory for ships with class notation **BC(A)** or **BC(B)**

3 Propulsion, power generation and auxiliary systems

Table 3 Additional class notations related to propulsion, power generation and auxiliary systems

Class Notation	*Qualifier*	*Purpose*	*Application*
Battery Mandatory: Yes Design requirements: Pt.6 Ch.2 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	**Power**	Battery installations for propulsion and other services	Mandatory for vessels where the battery power is used as the main source of power, or when the battery is used as a redundant source of power for class notations
	Safety	Battery installations used as an additional source of power	Mandatory for vessels where the battery installation is used as an additional source of power and has an aggregate capacity exceeding 50kWh (excluding lead acid and NiCd batteries)
E0 Mandatory: No Design requirements: Pt.6 Ch.2 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3 and Pt.7 Ch.1 Sec.4	<None>	Unattended machinery space	
ECO Mandatory: No Design requirements: Pt.6 Ch.2 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Centralised Operated machinery	
FC Mandatory: Yes Design requirements: Pt.6 Ch.2 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	**Power**	Fuel cell installations	Mandatory where the fuel cell power is used for essential, important or emergency services
	Safety	Fuel cell installations where the fuel cell power is not used for essential, important or emergency users.	Mandatory where the fuel used is a gas or a liquid fuel with flash point below 60°C

Class Notation	*Qualifier*	*Purpose*	*Application*
Fuel Mandatory: No Design requirements: Pt.6 Ch.2 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	**ν, ρ, T**	Fuel treatment and conditioning system, where **ν** is maximum viscosity in cSt at 50°C, **ρ** is maximum density in kg/m^3 of the fuel oil at 15°C, and **T** is minimum outside air temperature in °C for which the installations are approved	
Gas fuelled Mandatory: Yes Design requirements: Pt.5 Ch.2 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Gas fuelled engine installations	Mandatory when installed
Gas ready Mandatory: No Design requirements: Pt.6 Ch.2 Sec.8 FiS survey requirements: NA	**D**	Ship is designed for future conversion to liquefied natural gas (LNG) fuel	The qualifier **D** is mandatory for assigning the class notation **Gas ready**, and indicates that the design for the ship with LNG as fuel is in compliance with the **Gas fuelled** notation applicable for the newbuilding, ref. Ch.1 Sec.2 [1.3].
	S	Installed structural reinforcements to support the fuel containment system (LNG fuel tank(s)), and materials to support the relevant temperatures are used.	
	T	Installed Fuel containment system (LNG fuel tank(s)).	
	P	Installed pipe routing, structural arrangements for bunkering station, and gas valve unit space.	
	MEC	Main engine(s) installed can be converted to dual fuel.	The qualifier **MEC** is mandatory for assigning the class notation **Gas ready**. **MEI** can be used as an alternative.
	MEI	Main engine(s) installed can be operated on gas fuel.	

Class Notation	*Qualifier*	*Purpose*	*Application*
	AEC	Auxiliary engine(s) installed can be converted to dual fuel.	The auxiliary engine capacity after conversion shall be sufficient for the ship power balance.
	AEI	Auxiliary engines installed can be operated on gas fuel.	
	B	Boilers installed are capable of burning gas fuel.	
	MISC	Additional systems and equipment are installed on board from newbuilding stage.	
LFL fuelled Mandatory: Yes Design requirements: Pt.6 Ch.2 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Low flashpoint liquid fuelled engine installations	Mandatory when installed
RP Mandatory: No Design requirements: Pt.6 Ch.2 FiS survey requirements: NA	**1**	Main and alternative propulsion is provided by a common propulsion system (one propeller, one shaft and one rudder/steering gear) with redundant prime movers or two or more propellers	
	2	Propulsion and steering are of a redundant design with two (or more) propellers in parallel operation	
	3	Propulsion and steering are of a redundant design with two (or more) propellers in parallel operation and separated by watertight A-60 bulkheads	
	x	% of the propulsion power and where relevant, associated steering system, can be restored and maintained after single failure	Mandatory for **RP(1)**, **RP(2)**, and **RP(3)**

Class Notation	Qualifier	Purpose	Application
	+	Propulsion power and steering capacity is maintained without disruption upon any single failure	

4 Navigation and manoeuvring

Table 4 Additional class notations related to navigation and manoeuvring

Class Notation	Qualifier	Purpose	Application
DYNPOS Mandatory: No Design requirements: Pt.6 Ch.3 Sec.2Pt.6 Ch.3 Sec.1 FiS survey requirements: Pt.7 Ch.1 Sec.6	**AUTS**	Dynamic positioning system with no redundancy.	Includes single DP control system and manual levers control back-up
	AUT	Dynamic positioning system with no redundancy. Provides higher availability and robustness compared to **DPS(1)**	Includes single DP control system, single joystick control system and manual levers control back-up.
	AUTR	Dynamic positioning system with redundancy in technical design. Provides higher availability and robustness compared to **DPS(2)**	Includes redundant DP control system, single joystick control system and manual levers control back-up.
	AUTRO	Dynamic positioning system with redundancy and separation in technical design. Provides higher availability and robustness compared to **DPS(3)**	Includes redundant DP control system, single joystick control system and manual levers control back-up. In addition a single DP control system in a separated back-up control space.
	E	Dynamic positioning system with enhanced reliability. Position and heading keeping ability meets intentions comparable to or exceeding **DPS(2)**	Includes redundant DP control system and single independent alternative DP control system and manual levers control back-up. Provides flexibility and increased availability of power and thrust by use of connected power systems, standby start and change-over of generator sets and thrusters.

Class Notation	*Qualifier*	*Purpose*	*Application*
	ER	Dynamic positioning system with enhanced reliability. Position and heading keeping ability meets intentions comparable to or **DPS(2)** and **DPS(3)** (depending on which failure mode being evaluated).	Includes, in addition to the properties of qualifier E, fire resistant separation between redundancy groups, which in addition is watertight below main deck.
	A	Annual survey to be carried out in accordance with scope for renewal survey.	In combination with qualifiers **AUTR**, **AUTRO**, **E**, **ER**
DPS Mandatory: No Design requirements: Pt.6 Ch.3 Sec.2 FiS survey requirements: Pt.7 Ch.1 Sec.6	**1**	Dynamic positioning system with no redundancy corresponding to IMO guideline IMO MSC/Circ.645 "Guidelines for vessels with dynamic positioning systems" DP equipment class 1.	Includes single DP control system, single joystick control system and manual levers control back-up.
	2	Dynamic positioning system with redundancy in technical design corresponding to IMO guideline IMO MSC/Circ.645 "Guidelines for vessels with dynamic positioning systems" DP equipment class 2.	Includes redundant DP control system, single joystick control system and manual levers control back-up.
	3	Dynamic positioning system with redundancy and separation in technical design corresponding to IMO guideline IMO MSC/Circ.645 "Guidelines for vessels with dynamic positioning systems" DP equipment class 3.	Includes redundant DP control system, single joystick control system and manual levers control back-up. In addition a single DP control system in a separated back-up control space.
	A	Annual survey to be carried out in accordance with scope for renewal survey.	In combination with qualifiers **2**, **3**,

Class Notation	Qualifier	Purpose	Application
NAUT Mandatory: No Design requirements: Pt.6 Ch.3 FiS survey requirements: Pt.7 Ch.1 Sec.6	**NAV**	Requirements within bridge design, bridge instrumentation and workstation arrangements. Vessels with NAUT-notation will comply with the principles and aims of SOLAS V/15 and IMO MSC/ Circ.982.	Basic requirements.
	OC		Enhanced requirements for vessels operating world wide.
	AW		Enhanced requirements for vessels operating in coastal and narrow waters.
	OSV		Vessels operating as service vessels for offshore industry
	ICS	Enhanced multi functional workstation arrangement for network based navigational systems.	Vessels with class notation **NAUT**

5 Cargo operations

Table 5 Additional class notations related to cargo operations

Class Notation	Qualifier	Purpose	Application
Bow loading Mandatory: Yes Design requirements: Pt.6 Ch.4 Sec.1 FiS survey requirements: Pt.7 Ch.1 Sec.2,	<None>	Bow loading arrangement	Mandatory for **Tanker for oil** when installed
CCO Mandatory: No Design requirements: Pt.6 Ch.4 Sec.2 FiS survey requirements: Pt.7 Ch.1 Sec.4	<None>	Centralised cargo control for liquid cargoes	For vessels with class notation **Tanker for oil**, or **Tanker for oil products**, or **Tanker for chemicals**
EL Mandatory: No Design requirements: Pt.6 Ch.4 Sec.3 FiS survey requirements: Pt.7 Ch.1 Sec.6	<None>	Easy loading of cargo holds	**Ore carrier**

Class Notation	*Qualifier*	*Purpose*	*Application*
ETC Mandatory: No Design requirements: Pt.6 Ch.4 Sec.4 FiS survey requirements: NA	<None>	Effective tank cleaning	
MCDK Mandatory: No Design requirements: Pt.6 Ch.4 Sec.5 FiS survey requirements: Pt.7 Ch.1 Sec.2,	<None>	Movable car decks	
LCS Mandatory: Yes Design requirements: Pt.6 Ch.4 Sec.7 FiS survey requirements: Pt.7 Ch.1 Sec.6	<None>	Loading computer system	Mandatory if a loading computer calculating stability and/or hull strength is installed
	DC	Loading computer system to assist the master as a decision aid under damage conditions	Optional
REGAS Mandatory: No Design requirements: Pt.6 Ch.4 Sec.8 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Regasification plant	
RCP Mandatory: No Design requirements: Pt.6 Ch.4 Sec.9 FiS survey requirements: Pt.7 Ch.1 Sec.6	**X/Y**	Refrigerated container stowage positions, where X represents total number of certified refrigerated stowage positions, and Y is the percentage of refrigerated containers carrying fruit/chilled cargoes. Y shall be at least 20%.	

Class Notation	*Qualifier*	*Purpose*	*Application*
RM Mandatory: No Design requirements: Pt.6 Ch.4 Sec.10 FiS survey requirements: Pt.7 Ch.1 Sec.6	**X°C/Y°C sea**	Cargo refrigeration plant, where **X°C** is lowest chamber temperature and **Y °C sea** maximum seawater temperature	
RSCS Mandatory: No Design requirements: Pt.6 Ch.4 Sec.11 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Route specific container stowage	
STL Mandatory: Yes Design requirements: Pt.6 Ch.4 Sec.1 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Submerged turret loading system	Mandatory when installed
VCS Mandatory: No Design requirements: Pt.6 Ch.4 Sec.12 FiS survey requirements: Pt.7 Ch.1 Sec.6,	**1**	Systems for control of vapour emission from cargo tanks and in compliance with IMO MSC/Circ. 585	For vessels with class notation **Tanker for oil**, or **Tanker for oil products**, or **Tanker for chemicals**
	2	Systems for control of vapour emission from cargo tanks and in compliance with IMO MSC/Circ. 585 and USCG CFR 46 Part 39	
	3	Systems for onboard vapour processing with a minimum recovery rate of 78% of non-methane VOC	
	B	Additional requirements to vapour balancing.	For vessels with class notation **VCS(1)**, or **VSC(2)**

6 Equipment and design features

Table 6 Additional class notations related to equipment and design features

Class Notation	*Qualifier*	*Purpose*	*Application*
Container Mandatory: No Design requirements: Pt.6 Ch.5 Sec.1 FiS survey requirements: Pt.7 Ch.1 Sec.4	<None>	Equipped for carriage of containers	For vessels other than **Container ship**
Hatchcoverless Mandatory: No Design requirements: Pt.6 Ch.5 Sec.2 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	For hatchcoverless container ships equipped with the appropriate facilities	**Container ship**
Crane Mandatory: No Design requirements: Pt.6 Ch.5 Sec.3 FiS survey requirements: Pt.7 Ch.1 Sec.6	<None>	On board crane	Onboard crane certified by the Society
F Mandatory: No Design requirements: Pt.6 Ch.5 Sec.4 FiS survey requirements: Pt.7 Ch.1 Sec.6,	**A**	Additional fire protection in accommodation area	
	C	Additional fire protection in cargo area	
	M	Additional fire protection in machinery space	
HELDK Mandatory: No Design requirements: Pt.6 Ch.5 Sec.5 FiS survey requirements: Pt.7 Ch.1 Sec.6,	<None>	Helicopter deck	
	S	Additional requirements to vessel safety	
	H	Additional requirements to helicopter safety	
	F	Additional requirements to helicopter facility	

Class Notation	*Qualifier*	*Purpose*	*Application*
	CAA-N	Helicopter facility has been evaluated for additional requirements specified by the Norwegian Civil Aviation Authorities	
SF Mandatory: No Design requirements: Pt.6 Ch.5 Sec.6 FiS survey requirements: NA	<None>	Compliance with requirements to damage stability	**Offshore service vessel**
SPS Mandatory: No Design requirements: Pt.6 Ch.5 Sec.7 FiS survey requirements: Pt.7 Ch.1 Sec.6,	<None>	Ships carrying special personnel who are neither crew members nor passengers	
Inert Mandatory: Yes Design requirements: Pt.6 Ch.5 Sec.8 FiS survey requirements: Pt.7 Ch.1 Sec.2, and Pt.7 Ch.1 Sec.4	<None>	Inert gas system	Mandatory if installed on **Tanker for oil** DWT< 20 000 ton
LFL Mandatory: No Design requirements: Pt.6 Ch.5 Sec.9 FiS survey requirements: NA	**1**	Designed for carriage of liquid with flashpoint lower than 60°C	All ships except **Tanker for oil** and **Tanker for chemicals**
	2	Designed for carriage of liquid with flashpoint lower than 43°C	
DG Mandatory: No Design requirements: Pt.6 Ch.5 Sec.10 FiS survey requirements: Pt.7 Ch.1 Sec.6,	<None>	Arranged for carriage of solid dangerous goods in bulk and packaged form in compliance with SOLAS Reg.II-2/19	
	B	Arranged for carriage of solid dangerous goods in bulk in compliance with SOLAS Reg.II-2/19	

Class Notation	*Qualifier*	*Purpose*	*Application*
	P	Arranged for carriage of dangerous goods in packaged form in compliance with SOLAS Reg.II-2/19	
DBC Mandatory: No Design requirements: Pt.6 Ch.5 Sec.10 FiS survey requirements: Pt.7 Ch.1 Sec.6,	<None>	Arranged for carriage of solid dangerous goods in bulk in compliance with the technical provisions of the IMSBC Code	
OILREC Mandatory: No Design requirements: Pt.6 Ch.5 Sec.11 FiS survey requirements: Pt.7 Ch.1 Sec.6,	<None>	Recovered oil reception and transportation	All ships except **Tanker for oil**
SPM Mandatory: Yes Design requirements: Pt.6 Ch.5 Sec.12 FiS survey requirements: NA	<None>	Single point mooring	Mandatory for **Tanker for oil** when installed
ESV Mandatory: No Design requirements: Pt.6 Ch.5 Sec.13 FiS survey requirements: Pt.7 Ch.1 Sec.6,	**DP**	Enhanced verification of dynamic positioning	
	TAM	Enhanced verification of thruster assisted mooring or automatic thruster assisted mooring systems	
	PMS	Enhanced verification of power management system	
	SPT	Enhanced verification of steering, propulsion and thruster system	
	ICS	Enhanced verification of integrated control and monitoring system	
	DRILL	Enhanced verification of drilling control system	

Class Notation	*Qualifier*	*Purpose*	*Application*
	BOP	Enhanced verification of blow out prevention system	
	CRANE	Enhanced verification of crane control system	
	HIL-IS	"Hardware-In-the-Loop" (HIL) Testing where HIL test package is provided by independent HIL supplier	
	HIL-DS	"Hardware-In-the-Loop" (HIL) Testing where HIL test program package and HIL test package report are provided by independent HIL supplier and HIL test simulator package is provided by the organization delivering the HIL target system.	
Gas bunker Mandatory: No Design requirements: Pt.6 Ch.5 Sec.14 FiS survey requirements: NA	<None>	Equipped with dedicated gas fuel transfer equipment for supply of bunker to gas fuelled ships on a regular basis.	Applicable for vessels with class notation **Tanker for liquefied gas**
	VR-x	Equipped for handling of excess vapour return from the receiving ship with vapour recovery capacity of x kW.	
	EPC	Equipped with enhanced positioning control system.	
	TC	Equipped with enhanced transfer control system.	

7 Cold climate

Table 7 Additional class notations related to cold climate

Class Notation	*Qualifier*	*Purpose*	*Application*
Ice Mandatory: No Design requirements: Pt.6 Ch.6 FiS survey requirements: NA	**1A*F**	High powered vessels for regular traffic in heavy Baltic ice.	Vessels constructed according to Finnish-Swedish ice rules.
	1A*	Vessels intended for navigation in ice-infested waters	Constructed according to Finnish- Swedish ice rules (1A Super). Ice thickness 1.0 m
	1A	Vessels intended for navigation in ice-infested waters	Constructed according to Finnish- Swedish ice rules (1A). Ice thickness 0.8 m.
	1B	Vessels intended for navigation in ice-infested waters	Constructed according to Finnish- Swedish ice rules (1B). Ice thickness 0.6 m
	1C	Vessels intended for navigation in ice-infested waters	Constructed according to Finnish- Swedish ice rules (1C). Ice thickness 0.4 m
	C	Vessels intended for navigation in light ice conditions	
	E	Vessels intended for navigation in light localised drift ice	
PC Mandatory: No Design requirements: Pt.6 Ch.6 FiS survey requirements: NA	**1**	Vessels intended for navigation in ice-infested polar waters.	Year-round operation in all Polar waters
	2	Vessels intended for navigation in ice-infested polar waters	Year-round operation in moderate multi-year ice conditions
	3	Vessels intended for navigation in ice-infested polar waters	Year-round operation in second-year ice which may include multi-year ice inclusions
	4	Vessels intended for navigation in ice-infested polar waters	Year-round operation in thick first-year ice which may include old ice inclusions
	5	Vessels intended for navigation in ice-infested polar waters	Year-round operation in medium first-year ice which may include old ice inclusions

Class Notation	*Qualifier*	*Purpose*	*Application*
	6	Vessels intended for navigation in ice-infested polar waters	Summer/autumn operation in medium first-year ice which may include old ice inclusions
	7	Vessels intended for navigation in ice-infested polar waters	Summer/autumn operation in thin first-year ice which may include old ice inclusions
Winterized Mandatory: No Design requirements: Pt.6 Ch.6 FiS survey requirements: Pt.7 Ch.1 Sec.6,	**Basic**	Occasional operation in cold climate for short periods	
	Cold	Regular operation in cold climate or for an extended period of time	
	Polar	Operation in extreme cold climate of the polar regions year-round	
	t_d	Design temperature	
	Enhanced	Additional requirements of a higher level of winterization	
DAT Mandatory: No Design requirements: Pt.6 Ch.6 FiS survey requirements: NA	**t**	Design ambient air temperature suitable for regular service during winter to polar waters, where t denotes the lowest design ambient temperature in °C	

8 Environmental protection and pollution control

Table 8 Additional class notations related to environmental protection and pollution control

Class Notation	*Qualifier*	*Purpose*	*Application*
BWM Mandatory: No Design requirements: Pt.6 Ch.7 Sec.1 FiS survey requirements: Pt.7 Ch.1 Sec.6,	**E[m]**	Ballast water exchange.	m denotes method of exchange as follows: s - sequential method f - flow-through method d - dilution method
	T	Ballast water treatment	
Clean Mandatory: No Design requirements: Pt.6 Ch.7 Sec.2 FiS survey requirements: Pt.7 Ch.1 Sec.6,	<None>	Arrangements for controlling and limiting operational emissions and discharges	
	Design	Additional design requirements for protection against accidents and for limiting their consequences	
	Tier III	Compliance with the NOx emission requirements of Tier III according to MARPOL Annex VI, Regulation 13.	
ECA Mandatory: No Design requirements: Pt.6 Ch.7 Sec.3 FiS survey requirements: NA	**SOx-A**	designed to operate all machinery on marine distillate fuel.	Fuel and Lubrication Oil System and Arrangements for meeting Regulations in Emission Control Areas.
	SOx-P	Designed to operate machinery components used while in port on marine distillate fuel.	
Recyclable Mandatory: No Design requirements: Pt.6 Ch.7 Sec.4 FiS survey requirements: Pt.7 Ch.1 Sec.6,	<None>	Inventory of Hazardous Materials	

Class Notation	Qualifier	Purpose	Application
Shore power Mandatory: No Design requirements: Pt.6 Ch.7 Sec.5 FiS survey requirements: NA	<None>	Electric shore connections	
Silent Mandatory: No Design requirements: Pt.6 Ch.7 Sec.6 FiS survey requirements: Pt.7 Ch.1 Sec.6,	**A**	Vessels complying with specified maximum underwater noise emission	Vessels using acoustical equipment
	S		Vessels conducting seismic surveys
	F		Fishing vessel
	R		Research vessel
	E		Vessels demonstrating a controlled environmental noise emission

9 Living and working conditions

Table 9 Additional class notations related to living and working conditions

Class Notation	Qualifier	Purpose	Application
COMF Mandatory: No Design requirements: Pt.6 Ch.8 Sec.1 FiS survey requirements: NA	**C-crn**	Vessels designed for enhanced comfort by improved indoor climate. **crn** denotes comfort rating number	
	V-crn	Vessels designed for enhanced comfort by reducing noise and vibration. **crn** denotes comfort rating number	
VIBR Mandatory: No Design requirements: Pt.6 Ch.8 Sec.2 FiS survey requirements: Pt.7 Ch.1 Sec.6,	<None>	Limitations to vibration levels	

Class Notation	Qualifier	Purpose	Application
SAFELASH Mandatory: No Design requirements: Pt.6 Ch.8 Sec.3 FiS survey requirements: NA	<None>	Increased safety level for crew members and stevedores engaged in the handling and securing of containers.	**Container ships** and vessels assigned the additional class notation **Container**

10 Survey arrangements

Table 10 Additional class notations related to survey arrangement

Class Notation	Qualifier	Purpose	Application
BIS Mandatory: No Design requirements: Pt.6 Ch.9 Sec.1 FiS survey requirements: Pt.7 Ch.1 Sec.6	<None>	Built for in-water survey of the vessel bottom and related items	
ESP Mandatory: Yes Design requirements: Pt.6 Ch.9 Sec.2 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4Pt.7 Ch.1 Sec.5	<None>	Vessels subject to an enhanced survey programme	Mandatory for vessels with class notations: **Bulk carrier** **Tanker for oil** **Bulk carrier or tanker for oil** and **Tanker for chemicals** **Tanker for c** having integral tanks intended for carriage of liquid chemicals in bulk in accordance with the IBC Code
HLP Mandatory: No Design requirements: Pt.6 Ch.9 Sec.3 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Hull life cycle programme	

Class Notation	*Qualifier*	*Purpose*	*Application*
HMON Mandatory: No Design requirements: Pt.6 Ch.9 Sec.4 FiS survey requirements: Pt.7 Ch.1 Sec.6,	**An**	Hull monitoring at various locations to reduce the need for internal survey through increased focus on hull stress warnings. n denotes number of sensors	Sensor monitoring acceleration along one axis
	Bn		Statistical back-up and trigged time series to be sent annually to the Society
	Cn		Online link to loading computer which is continuously up-dating the loading condition
	Dn		Online data link between hull monitoring system on board to office ashore. The link shall make it possible to operate the system from an onshore computer, perform maintenance and transfer data
	En		Sensor monitoring the propulsion shaft(s) output/ rpm
	Gn		Sensor monitoring global hull strain
	Hn		Sensor monitoring the liquid motion pressures in tanks (sloshing)
	Ln		Sensor monitoring local hull strain
	Mn		Device for monitoring of hull rigid body motions (six degrees of freedom)
	On		Navigation sensors (position fixing system (e.g. GPS), speed log, gyro compass, rudder angle, etc.)
	Pn		Sensor monitoring the sea pressure acting on the hull
	Sn		Device for monitoring the sea-state
	Tn		Sensor monitoring the temperature
	Wn		Wind sensor for wind speed and wind heading

Class Notation	*Qualifier*	*Purpose*	*Application*
TMON Mandatory: No Design requirements: Pt.6 Ch.9 Sec.5 FiS survey requirements: Pt.7 Ch.1 Sec.6,	<None>	Tail shaft monitoring enables operators to continuously observe and assess the condition of the shaft(s) which may extend interval between tail shaft surveys/ shaft withdrawal	
BMON Mandatory: No Design requirements: Pt.6 Ch.9 Sec.6 FiS survey requirements: Pt.7 Ch.1 Sec.6,	<None>	Boiler monitoring reduces the need for internal survey at every alternate survey through increased focus on water management	

11 Naval

Table 11 Additional class notations related to naval vessels

Class Notation	*Qualifier*	*Purpose*	*Application*
NAUT Mandatory: No Design requirements: Pt.6 Ch.10 Sec.1 FiS survey requirements: Pt.7 Ch.1 Sec.6	**Navy**	Basic requirements to bridge design, bridge instrumentation, and workstation arrangement	All naval flagged vessels and administered by a national naval administration, except: — vessel of less than 24 meters L_{OA} — submarines
Naval support Mandatory: Yes Design requirements: Pt.5 Ch.13 Sec.3 FiS survey requirements: Pt.7 Ch.1 Sec.2, Pt.7 Ch.1 Sec.3, and Pt.7 Ch.1 Sec.4	<None>	Naval operations and Naval support operations	Naval flagged vessels and administered by a national naval administration
	Hull	Naval requirements for arrangements, loads and hull strength	
	STAB	Naval requirements for stability	
	System	Naval requirements for piping, machinery, electrical, control and monitoring	
	Fire	Naval requirements for fire safety	
	EVAC	Naval requirements for safe evacuation	
	RADHAZ	Naval requirements for radiation hazards	
	EMC	Naval requirements for electromagnetic compatibility	
	SAM	Naval requirements for storage rooms for ammunition	

11.1 General

11.1.1 The class notation **Naval support** may be combined with ship type notations in Pt.5.

11.1.2 The qualifiers to **Naval support** are optional

11.1.3 Any combination of qualifiers for **Naval support** are allowed. For example **Naval support(Hull, STAB, Fire)**

SECTION 5 SERVICE AREA

1 Service area notation

1.1 General

1.1.1 The service area notation **R** followed by a number or a letter will be assigned to vessels with modified requirements to arrangement, equipment or scantlings, in relation to vessels built for unrestricted trade.

The service area restrictions, given in nautical miles and representing the maximum distance from nearest port or safe anchorage, are given in Table 1 of this section. For the various service area notations the restrictions are related to the zones, areas and seasonal periods as defined in the International Convention on Load Lines, 1966, Annex II.

The service area notation **RE** is limited to enclosed waters such as fjords, ports, rivers and lakes.

The service area restrictions as related to the assigned service area notation will be included in the "Appendix to the Class Certificate".

Table 1 Service area restrictions

Service area notations	*Seasonal zones (nautical miles)*		
	Winter	*Summer*	*Tropical*
R0	250	No restrictions	No restrictions
R1	100	200	300
R2	50	100	200
R3	20	50	100
R4	5	10	20
RE	Enclosed waters		

1.1.2 Modified requirements related to the various service area notations are given in the relevant sections of the rules. The modifications will affect:

— design hull girder loads
— design pressures on shell, weather decks, superstructures and deckhouses
— anchoring and mooring equipment
— arrangement
— stability.

1.1.3 The flag administration, the domestic requirements of which are being applied under the provision of Ch.1 Sec.2 [1.3.5] (local trade), shall be indicated in parentheses after the service area notation, by using lower-case country codes in accordance with ISO 3166, (e.g. **R2 (nor)**, should the flag administration be Norway or **R2 (usa)** should the flag administration be U.S.A. etc.).

1.1.4 Other service restrictions or operational limits included in the design assumptions for a vessel will be stated in the "Appendix to the Class Certificate", and/or on special signboards.

DNV GL

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SAFER, SMARTER, GREENER