Summary of main changes –
January 2017
RULES FOR CLASSIFICATION

Ships

Edition January 2017

Part 1 General regulations

Chapter 1 General regulations

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CHANGES – CURRENT

This document supersedes the October 2015 edition.
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Main changes January 2017, entering into force 1 July 2017

- Sec.1 - Classification Principles
  - Sec.1 [1.1.1]: clarification of services offered
  - Sec.1 [1.1.2]: clarifications of relationship between Terms & Conditions and the Rules
  - Sec.1 Table 2: the definition of Classification has been amended to specify extent and method for verification of compliance
  - Sec.1 Table 2: added definition: 'Ultimate Owning Company'
  - Sec.1 [2.3.3]: clarification of Owner’s responsibility
  - Sec.1 [2.6.5]: added paragraph: regarding rights to disclose relevant documentation.

- Sec.2 - Assignment of Class
  - Sec.2 [3]: clarification of issuance of Class Certificate
  - Sec.3 [2.6.2]: deleted Guidance Note considered superfluous
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- Sec.3 - Retention of Class
  - Sec.3 [1.3.3] and Sec.3 [2.5.1]: clarification of which certification requirements to apply on an existing vessel
  - Sec.3 [3.1.3]: changed procedural requirement for postponement of the Class Certificate

- Sec.4 - Certification of materials, components and systems
  - Sec.4 [2.3.1]: editorial corrections made

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 1 General regulations

Chapter 2 Class notations
CHANGES – CURRENT

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Main changes January, entering into force 1 July 2017

• Sec.3 - Ship type notations
  — Sec.3 Table 5: added class notation Barge for oil products with flashpoint above 60°C
  — Sec.3 Table 5: added class notation Barge for asphalt/bitumen
  — Sec.3 Table 6: added application for class notation Tanker for chemicals with flashpoint above 60°C
  — Sec.3 Table 6: added class notation Barge for chemicals with flashpoint above 60°C

• Sec.4 - Additional class notations
  — Sec.4 Table 6: added class notation Walk2work

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 1 General regulations
Chapter 3 Documentation and certification requirements, general
CHANGES – CURRENT

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Main changes January 2017, entering into force 1 July 2017

• Sec.2 Documentation Requirements, General
  — Sec.2 [2.1.1]: included documentation requirements given by ship type notations.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 2 Materials and welding

Chapter 1 General requirements for materials and fabrication
CHANGES – CURRENT

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Main changes January 2017, entering into force 1 July 2017

• Sec.2 Manufacture, survey and certification
  — Sec.2 [2.1]: Description of WWA amended. Covering of WWA and HWA by AoM included.
  — Sec.2 [3.2.5]: Including of CET formula to be alternatively used for VL460 and higher grades in compliance with IACS UR W 16

• Sec.3 Testing procedures
  — Sec.3 [3.2.5]: Wording amended for dimensions of Charpy V-notch specimens
  — Sec.3 [3.3]: Including of dimensions of bend test specimen for cast steel, forgings and semi-finished products
  — Sec.3 [3.1.8]: Including of information for alternative test specimen for tensile testing of thick plates in compliance with IACS UR W 16

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 2 Materials and welding
Chapter 2 Metallic materials
CHANGES - CURRENT

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Main changes January 2017, entering into force 1 July 2017

- **Sec.2** Rolled steel for structural application
  - Sec.2 Table 1: Heat treatment conditions amended and parameters for recording added
  - Sec.2 Table 2: BCA / COD grades included to 'Through thickness tensile test' resp. 'Fracture mechanics test'
  - Sec.2 Table 6: Toughness of VL A ≤ 50 mm and VL B ≤ 25 mm specified
  - Sec.2 Table 16: Adjustment of grade specification and footnotes 3) and 4)
  - Sec.2 Table 17: Footnote for grades 890MPa and 960MPa implemented
  - Sec.2 [5.1]: Grades 890MPa and 960MPa included

- **Sec.3** Rolled steel for boilers, pressure vessels and special applications
  - Sec.3 [1.9.5]: Consideration of limitation of the yield to tensile ratio
  - Sec.3 [1.14]: Including of standards for intercrystalline corrosion testing
  - Sec.3 [3.2.1]: Including option to approve steel grades with t > 40 mm
  - Sec.3 [4.6]: Including of standards for intercrystalline corrosion testing

- **Sec.5** Steel pipes and fittings
  - Sec.5 [1.5.5]: Consideration of limitation of the yield to tensile ratio
  - Sec.5 [1.10]: Definition of applicable test pressure for hydrostatic leak-tightness test
  - Sec.5 [3.6.2]: Deviation of testing temperature to be +/-2°C implemented
  - Sec.5 [4.1.1]: Consideration of pipes with thickness t>25 mm included
  - Sec.5 Table 3: Heat treatment condition included
  - Sec.5 [5.3]: Manufacturing processes updated with "cold finished electric resistance or induction welded followed by heat treatment"
  - Sec.5 [6.7.3]: Deviation of testing temperature to be +/-2°C implemented

- **Sec.6** Steel forgings
  - Sec.6 [1.8.3]: Location of thermocouples on furnace charge during heat treatment
  - Sec.6 Figure 4: Placement of specimen on the driven side of crankshaft revised
  - Sec.6 [8.3.1]: Wording amended for Charpy V-notch testing for stainless steels other than austenitic stainless steels

- **Sec.8** Steel castings
  - Sec.8 [1.6.4]: Amended description of welding workshop approval
  - Sec.8 [1.8.3]: Location of thermocouples on furnace charge during heat treatment
  - Sec.8 [2.3.1]: Deleting of condition "fully annealed"

- **Sec.10** Aluminium alloys
— Sec.10 [1.11.1]: Definition of grades to be subject to corrosion testing

- Sec.11 Copper alloy castings
- Sec.11 [1.8.2]: Location of thermocouples on furnace charge during heat treatment

**Editorial corrections**

In addition to the above stated changes, editorial corrections may have been made.
RULES FOR CLASSIFICATION

Ships

Edition January 2017

Part 2 Materials and welding
Chapter 4 Fabrication and testing

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Main changes January 2017, entering into force 1 January 2017

• Sec.1 General
  — Sec.1 [1.3.1]: Reference to assignment of class has been deleted
  — Sec.1 [1.3.2]: Paragraph deleted
  — Sec.1 [1.3.3]: Applicable structures/components or WWA included
  — Sec.1 Table 2: Added reference for ISO 17662
  — Sec.1 Table 3: Reference to EN 1011-1 regarding thermal efficiency
  — Sec.1 Table 3: Heat input for multi-wire welding included
  — Sec.1 Table 3: Essential welding parameters included
  — Sec.1 Table 4: Clarification of applicability of WWA
  — Sec.1 Table 6: Additional description revised for welding
  — Sec.1 Table 7: Document type revised
  — Sec.1 Table 7: Additional description revised

• Sec.3 Qualification of welders
  — Sec.3 [2.1.1]: Reference to EN 287 deleted

• Sec.4 Welding consumables
  — Sec.4 [1.5.1]: Added steel groups
  — Sec.4 [1.5.4]: Added paragraph and reference for welding consumables for the repair of copper alloys
  — Sec.4 [1.5.5]: Added paragraph for welding consumables for other non-ferritic materials
  — Sec.4 [1.5.6]: Welding consumables for steel grades with minimum specified yield strength 890 and 960 MPa included
  — Sec.4 Table 6: Comment for welding consumables Y42
  — Sec.4 Table 7: Reference revised

• Sec.5 Welding procedures
  — Sec.5 [1.1.1]: BCA and COD grades included
  — Sec.5 [1.4.1]: Requirement for weldability of the base metal using high heat input welding deleted
  — Sec.5 [1.5.1]: Maximum thickness set for wide gap welding
  — Sec.5 [2.1.3]: Added Guidance Note for Calibration and validation
  — Sec.5 [2.1.6]: Weld bead included to weld parameters to be recorded
  — Sec.5 [2.1.7]: Added WPQR and corresponding
  — Sec.5 [3.1.1]: Guidance note revised
  — Sec.5 [3.1.2]: Paragraph transferred into guidance note
  — Sec.5 [3.2.5]: Mandrel diameter for SMYS > 690 MPa included
  — Sec.5 [3.6.1]: Added text for vertical-down fillet welds on structural steel grades A to F40
  — Sec.5 [5.3.2]: Maximum hardness limit for VL 890 and VL 960 included
  — Sec.5 [5.6.1]: Added text and guidance note / example for the qualification range of steels
— **Sec.5 [6.2.2]**: Deleted under d) first bullet point; new qualification only for TM steels not pre-qualified requested
— **Sec.5 [6.2.6]**: Information on consumable classification added
— **Sec.5 [6.2.9]**: Added exemption for SMAW in welding current change from A.C. to D.C.
— **Sec.5 [8.2.3]**: Added text in guidance note for essential parameters
— **Sec.5 [8.3.2]**: Added definition for t
— **Sec.5 [9.2.2]**: Adjusted text for Charpy V-notch locations acc. to the IGC code and added test temperature for austenitic stainless steels
— **Sec.5 [11.2.1]**: Added minimum
— **Sec.5 [12.2.5]**: Added paragraph for the macrosection
— **Sec.5 Table 15**: Filler grade 5556 included

**• Sec.6 Fabrication and tolerances**
— **Sec.6 [5.2.3]**: Added text and guidance note for representatively cold formed material
— **Sec.6 [5.3.10]**: Added text for tack welding - when integrated in production weld
— **Sec.6 [6.1.2]**: Added or and followed by

**• Sec.7 Non destructive testing of welds**
— **Sec.7 [1.1.3]**: Adjusted text for the inspection body to a guidance note

**Editorial corrections**

In addition to the above stated changes, editorial corrections may have been made.
Part 3 Hull

Chapter 1 General principles
CHANGES – CURRENT

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Amendments January 2017

• Sec.3 Verification of compliance
  — Sec.3 [2]: The text has been clarified.

Main changes July 2016, entering into force as from date of publication

• Sec.1 Application
  — Sec.1 [1]: Scope of documentation and certification for CSR ships clarified.

• Sec.3 Verification of compliance
  — Sec.3 [2] and Sec.3 [3]: The requirement to VL material certificate for hull structure is clarified for CSR and non-CSR ships. Scope of documentation for CSR ships clarified.
  — Sec.3 Table 1: Modified documentation requirements.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 3 Hull

Chapter 2 General arrangement design
CHANGES – CURRENT

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Amendments January 2017

• Sec. 2 Subdivision arrangement
  — Sec.2 [4.1.1]: Symbol corrected and maximum distance for ships less than 100 m added.

Amendments July 2016

• Sec. 2 Subdivision arrangement
  — Sec.2 [1.1.6]: Editorial corrections have been made.
  — Sec.2 [2]: Editorial corrections have been made.

• Sec. 3 Compartment arrangement
  — Sec.3 [6.1.2]: Editorial corrections have been made.

Amendments January 2016

• General
  — Only editorial corrections have been made.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
RULES FOR CLASSIFICATION

Ships

Edition January 2017

Part 3 Hull

Chapter 3 Structural design principles

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Main changes January 2017, entering into force as from date of publication

• Sec.1 Materials
  — Sec.1 [2.3.2]: A/AH may be used for strength members not mentioned in Table 3 to Table 9
  — Sec.1 [4.5.5]: Clarified that bi-metallic connections shall not be subject to high tension stresses.

• Sec.2 Net scantling approach
  — Sec.2 Table 1: For non-ESP ships grillage analysis may be carried out on gross scantling.

• Sec.3 Corrosion additions
  — Symbols: Net scantling definition of reserve thickness $t_{res}$ is modified for better understanding.

• Sec.4 Corrosion protection
  — Sec.4 [1.2]: Requirements related to fitting of aluminium in cargo tanks clarified in line with UR F2 Aluminum coatings on board oil tankers and chemical tankers
  — Sec.4 [2.1.4]: Requirements related to aluminum fitting in cargo tanks aligned with UR F1 Aluminum coatings on board oil tankers and chemical tankers.

• Sec.6 Detail design
  — Sec.6 Figure 4: The definitions in item (c) and (d) clarified
  — Sec.6 [2.3]: The requirements are clarified. In addition, a new requirement is introduced addressing the risk of plate cracking due relative deflection between stiffeners perforating tank bulkheads and the adjacent bulkhead stiffener
  — Sec.6 [3.3.5]: The requirement to arm length of tripping bracket is modified to be more in line with common industry standards.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
RULES FOR CLASSIFICATION

Ships

Edition January 2017

Part 3 Hull

Chapter 4 Loads
CHANGES – CURRENT

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Main changes January 2017, entering into force as from date of publication

• Sec.2 Dynamic load cases
  — Sec.2 Table 6 and Sec.2 Table 12: The horizontal bending moment is lifted to be consistent with the bending moment found in global analysis.

• Sec.3 Ship motions and accelerations
  — Sec.3 [2.2.3] and Sec.3 [2.2.5]: The heave and pitch accelerations are adjusted down for ships less than 100m.

• Sec.4 Hull girder loads
  — Sec.4 [3.3.1]: The horizontal bending moment is lifted to be consistent with the bending moment found in global analysis.

• Sec.5 External loads
  — Sec.5 [1.3.5]: The BSR pressure is modified
  — Sec.5 [1.3.8]: The OSA pressure is limited at wave crest of the OSA to avoid local area with higher pressure in waterline
  — Sec.5 [2.2]: A more realistic green sea pressure is introduced for decks with recess.

• Sec.6 Internal loads
  — Sec.6 Table 1: Structural testing is required for chain locker with water to the top of chain pipe. The design pressure is updated accordingly
  — Sec.6 [1.2.7]: The minimum flooding pressure, for tight boundaries above bulkhead deck and equilibrium waterline, is removed. The application of this pressure is not justified.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 3 Hull
Chapter 5 Hull girder strength
CHANGES – CURRENT

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Main changes January 2017, entering into force as from date of publication

- Sec.2 Vertical hull girder bending and shear strength
  - Sec.2 [2.3.1]: Error correction.

- Sec.3 Hull girder yield check
  - Sec.3 [3.1.1]: A new factor $C_M$ is introduced in connection with modified horizontal wave bending moment in Ch.4.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 3 Hull

Chapter 6 Hull local scantling
CHANGES – CURRENT

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Main changes January 2017, entering into force as from date of publication

• Sec.3 Minimum thicknesses
  — Sec.3 Table 1: The minimum thickness of superstructure side is adjusted.

• Sec.4 Plating
  — Sec.4 Table 1: The acceptance criteria for flooding pressure is adjusted for plate and stiffeners.

• Sec.5 Stiffeners
  — Sec.5 Table 4: The acceptance criteria for flooding pressure is adjusted for plate and stiffeners.

Editorial corrections

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RULES FOR CLASSIFICATION

Ships

Edition January 2017

Part 3 Hull

Chapter 8 Buckling
CHANGES – CURRENT

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Main changes January 2017, entering into force as from date of publication

• Sec.1 General
  — Sec.1 [2.1.3]: The buckling criteria for PMA platforms are clarified.

• Sec.2 Slenderness requirements
  — Sec.2 [5.1]: The required maximum distance between tripping brackets is found unreasonable for some structural members and has been modified to be more in line with established industry standards.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 3 Hull

Chapter 10 Special requirements
CHANGES – CURRENT

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Main changes January 2017, entering into force as from date of publication

- Sec.6 Special hull structures
  - Sec.6 [3]: Blow out by air may be used to open sea chests and this design load shall be accounted for. The rules are however simplified so that 2 bar may be used and there is no need to request information about actual pressure from the designer.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 3 Hull

Chapter 11 Hull equipment, supporting structure and appendages
CHANGES – CURRENT

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Main changes January 2017, entering into force as from date of publication

• Sec.1 Anchoring and mooring equipment
  — Sec.1 [3.1.2]: Projected area calculation for EN of mooring. A difference from IACS had been noted and is now corrected
  — Sec.1 Table 10: Calculation of continuous duty pull. The requirement is aligned with IACS.

• Sec.2 Supporting structure for deck equipment and fittings
  — Sec.2 [4.3]: The difference between requirement to offshore cranes and other cranes is clarified.

• Sec.3 Bulwark and protection of crew
  — Sec.3 [2.2.10]: The reference to every frame is not found appropriate for bulwark in the bow area. The text is deleted and replaced with a reference to the bow impact requirements for bulwarks.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 3 Hull
Chapter 12 Openings and closing appliances
CHANGES – CURRENT

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Main changes January 2017, entering into force as from date of publication

• Sec.1 General
  — The text is revised to clarify the requirements and align with IACS.

• Sec.2 Access openings in freeboard deck and other exposed decks
  — The text is revised to clarify the requirements and align with IACS.

• Sec.3 Internal doors and hatches
  — The text is revised to clarify the requirements and align with IACS.

• Sec.5 Side, stern and bow doors - ramps
  — The requirements to shell doors are aligned with IACS.

• Sec.6 Windows, side scuttles and skylights
  — Sec.6 [5.2]: A minimum requirement is introduced for the adhesive bonding for windows.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
RULES FOR CLASSIFICATION

Ships

Edition October 2015
Amended January 2017

Part 3 Hull

Chapter 13 Welding
CHANGES – CURRENT

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Amendments January 2017

• Sec.1 Design of weld joints
  — Symbols: Correction of error related to minimum yield stress for weld deposits
  — Sec.1 [2.3.3]: The requirement is clarified.

Amendments January 2016

• Sec.1 Design of weld joints
  — [2.4.5]: Clarified the symbols
  — [2.5.8]: Clarification

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 3 Hull
Chapter 14 Rudders and steering
CHANGES – CURRENT

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Amendments January 2017

• General
  — Only editorial corrections have been made.

Amendments January 2016

• Sec.1 Rudders, sole pieces and rudder horns
  — Sec.1 [6.2.3]: Symbol changed from $k_r$ to $k_{ru}$.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 3 Hull

Chapter 15 Stability
CHANGES – CURRENT

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Amendments January 2017

- Sec.1 Stability
  - Sec.1 [2.1.1]: Small adjustment of text regarding external watertight integrity survey, since this survey is not fully covered by a load line survey
  - Sec.1 [5.1.2] has been deleted.

Main changes July 2016, entering into force as from date of publication

- Sec.1 Stability
  - Paragraph [1.1.5] deleted to remove mandatory application of crane requirements.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 4 Systems and components

Chapter 2 Rotating machinery, general
CHANGES – CURRENT

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Amendment January 2017

- Sec.1 Introduction
  - Sec.1 [6.1.5]: New paragraph added regarding resilient mounting.

Main changes July 2016, entering into force 1 January 2017

- Sec.2 Torsional vibrations
  - Sec.2 [2.3.1]: A new guidance note has been included regarding inertia of entrained water.

- Sec.4 Shaft alignment
  - Sec.4 [2.1.4]: Procedure from shaft alignment calculation shall include description of method and be possible to re-use when in service.

- Sec.5 Electric power generation
  - Sec.5 [1.4]: A reference to Pt.4 Ch.3 for applicable load tests has been included.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 4 Systems and components
Chapter 3 Rotating machinery - drivers
CHANGES – CURRENT

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Main changes January 2017, entering into force 1 July 2017

• Sec.1 Reciprocating internal combustion engines
  The section has been updated with requirements related to:
  — integration testing as specified in IACS UR M51 Factory Acceptance Test and Shipboard Trials of I.C. Engines
  — placement of inlet air ventilators in double walled/ducted gas piping according to the IGF code
  — simplification of requirements for accumulators unique and standard design.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 4 Systems and components
Chapter 4 Rotating machinery – power transmission
CHANGES – CURRENT

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Main changes January 2017, entering into force 1 July 2017

- Sec.1 Shafting
  - Sec.1 Table 8: Clarification of the certification required for shafts in gears and thrusters

- Sec.2 Gear transmissions
  - Sec.2 [3.1]: General editorial update, the subsection is renumbered
  - Sec.2 [3.1.2]: Ancillaries can be handled by manufacturer as relevant

- Sec.3 Clutches
  - Sec.3 [3.2.1]: Ancillaries can be handled by manufacturer as relevant

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 4 Systems and components
Chapter 5 Rotating machinery - driven units
CHANGES – CURRENT

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Main changes January 2017, entering into force 1 July 2017

• General
  — Various editorial updates.

• Sec.2 Water jets
  — Sec.2 [3.1.2]: Ancillaries shall be handled by manufacturer as relevant.

• Sec.3 Podded and geared thrusters
  — Sec.3 Table 1: Updated definition for steering system.
  — Sec.3 [1.4.5]: Included control systems in certification.
  — Sec.3 [2.4.3]: IACS UI SC242 is referred to in guidance note.
  — Sec.3 [2.4.10]: Revised rules for crash stop with propulsion thrusters. Turning speed requirement of 2 rpm with quay test is removed. It is opened up for alternative procedures.
  — Sec.3 [2.8.5]: Removed text regarding one pump per thruster.
  — Sec.3 [1.4.9] and Sec.3 [3.1.2]: Ancillaries shall be handled by manufacturer as relevant.
  — Sec.3 [2.4.13] and Sec.3 [9.1.1]: Steering gear tests for thrusters are now handled in Sec.3 and references to Ch.10 Sec.1 is removed.
  — Sec.3 [9.1.7]: Dockside test removed (now a part of SG trial).

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 4 Systems and components
Chapter 6 Piping systems
CHANGES – CURRENT

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Main changes January 2017, entering into force 1 July 2017

• General
  — All remaining redundancy requirements removed (e.g. filters to be redundant or fitted with bypass, minimum two sea chests required for scrubber systems) as exhaust gas cleaning is not considered an essential function
  — Redundancy requirements for EGC systems have been removed (filters no longer to be redundant or fitted with bypass, single sea chest now allowed for scrubber systems).
  — Aqueous and anhydrous ammonia generally not allowed as reductant in NOx SCR systems.

• Sec.1 General
  — Docreq item for NOx systems requiring measurement report has been removed as the requirement is obsolete. Sec.1 [3.1.1] Table 4 has been deleted.

• Sec.8 Pollution prevention
  — Sec.8 [2.4] and Table 2: Added specific section for urea based NOx reduction systems, incorporating relevant requirements from fuel oil system requirements, in line with IACS UR for ammonia storage and handling, coming into force in January 2018. Other treatment fluids are still covered by the old rules. This replaces the previous method of cross-referencing the fuel requirements, regarding pipe class, arrangements, testing, material selection, etc.
  — Sec.8 [3.2]: Added new requirements for inline exhaust gas cleaning systems, should have been added when these were first introduced in 2014
  — Sec.8 [3.6] and Table 3: Added specific section for NaOH based treatment fluid systems for SOx cleaning systems, incorporating the relevant requirements from fuel oil system requirements and thus replacing the old general reference to these rules. Other treatment fluids are still covered by the old rules.
  — Sec.8 [3.6]: Added specific section for NaOH based systems incorporating relevant requirements from fuel oil system requirements
  — Sec.8 [3.4.1] referring to Sec.5 [2] has been replaced by rules Sec.8 [3.4.1], Sec.8 [3.4.2], Sec.8 [3.4.3], Sec.8 [3.4.4] and Sec.8 [3.4.5].
  — Sec.8 [3.6.12]: New requirement for portable storage tanks for NaOH handling and storage.
  — Sec.8 [3.2.8], Sec.8 [3.12.4] and Sec.8 [3.9.6]: New requirements for inline exhaust gas cleaning systems, taking into account increased risk of backflow and consequences of structural failures in scrubber unit. The requirements cover the design of the scrubber unit, the drainage arrangements and additional control and monitoring scope.
  — Minor clarifications and changes to exhaust gas cleaning system rules in Sec.8 [2.2.1, 2.2.3, 2.3.1, 2.4.10, 2.4.12, Table 2, 3.2.3, 3.3.1, 3.3.8, 3.3.9, 3.4.10, 3.4.11 and Table 3] and Sec.10 [5.2.1].
  — Sec.8 [3.10.2]: Clarified required content in test procedure for quay and sea trial for SOx cleaning systems.

• Sec.10 Manufacture, workmanship, inspection and testing
  — Minor clarifications and changes to exhaust gas cleaning system rules in Sec.10 [5.2.1].
Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 4 Systems and components
Chapter 7 Pressure equipment
CHANGES – CURRENT

This document supersedes the October 2015 edition. Changes in this document are highlighted in red colour. However, if the changes involve a whole chapter, section or sub-section, normally only the title will be in red colour.

Main changes January 2017, entering into force July 2017

• Sec.1 Pressure equipment
  — Sec.1 [1.2.2]: Reference to Pt.4 Ch.6 Sec.6 has been added for pressure equipment in refrigeration plants.
  — Sec.1 Table 2: Differentiation between flammable gases and non-flammable gases has been added.
  — Sec.1 [2.5.1]: Guidance note has been added.
  — Sec.1 [2.5.2]: Text and table moved to Sec.1 [3.2.1].
  — Sec.1 [3.1.4]: Guidance note has been added.
  — Sec.1 [3.1.5]: Drawing approval for charge air cooler has been dispensed with.
  — Sec.1 Table 5 to Table 7 and Table 9: Explanations have been added and typing errors have been corrected.
  — Sec.1 Table 6: Certification requirements for plates, dished ends and heads of pressure equipment class II changed to certificate type MC issued by manufacturer.
  — Sec.1 Table 7: Certification requirement for plates, dished ends and heads of pressure equipment class III changed to certificate type TR issued by manufacturer.
  — Sec.1 [3.2.3]: Special requirements for gas cylinders in fixed fire extinguishing systems added.
  — Sec.1 [5]: Approval and certification requirements for gas cylinders for fixed fire extinguishing systems modified.

• Sec.2 Materials
  — Sec.2 [1.1.1]: Guidance note has been added.
  — Sec.2 [1.2.1]: Low temperature limit for rolled steels deleted.

• Sec.3 Arrangement
  — Sec.3 [3.2.1]: Requirement for the approval of the fixed fire extinguishing system removed.
  — Sec.3 [3.2.2]: Water delivery requirement for the fixed fire extinguishing system removed.

• Sec.4 General design requirements
  — Sec.4 [2.9.1]: Specific joint efficiencies modified to joint efficiency ranges.
  — Sec.4 [3.7]: Specific requirements for minimum wall thickness of heat exchanger tubes deleted, applicable design loads and design requirements with reference to other pressure equipment codes added.
  — Sec.4 [5.2.2]: Transfer errors for coefficient $Y_i$ corrected.
  — Sec.4 [8.2.1]: Transfer errors corrected and requirements for gusset stay design revised.

• Sec.5 Mountings and fittings
  — Sec.5 [4.2.1]: Guidance note has been added.

• Sec.7 Manufacture, workmanship and testing
— Sec.7 [1.1.1]: Reference to DNVGL-CP-0261 Pressure equipment added and application limited to welded, pressed and heat treated pressure equipment and seamless gas cylinders.
— Sec.7 [4.1.3]: Requirements for non-destructive testing (NDT) for joint efficiency v≤0.7 added.

**Editorial corrections**

In addition to the above stated changes, editorial corrections may have been made.
RULES FOR CLASSIFICATION

Ships

Edition January 2017

Part 4 Systems and components
Chapter 8 Electrical installations
Changes – current

This document supersedes the July 2016 edition.
Changes in this document are highlighted in red colour. However, if the changes involve a whole chapter, section or sub-section, normally only the title will be in red colour.

Main changes January 2017, entering into force 1 July 2017

• Sec.1 Service description
  — Sec.1 Table 1: Reduced requirement for when a FMEA has to be submitted.
  — Sec.1 Table 1: Added requirement for THD calculation when harmonic filters are installed.
  — Sec.1 Table 1: Added requirement for test procedure for quay and sea trial. This shall be approved locally (at the newbuilding site).
  — Sec.1 Table 2: Added documentation requirements to permanent magnet machines.
  — Sec.1 Table 2: Added requirements for documentation for slip ring units.
  — Sec.1 Table 2: Added requirements for documentation for propulsion control systems.
  — Sec.1 [2.3.1]: Added requirements for Type Approval for lighting control systems.
  — Sec.1 [2.3.1] and Sec.1 [2.3.2]: Clarified when type approval certificates can be replaced by a product certificate. Also added clarification for aluminium cables and their termination accessories.
  — Sec.1 Table 3: Added certification requirements for slipring units, harmonic filters and termination accessories for aluminium cables.

• Sec.2 System design
  — Sec.2 [1.2.8]: Added requirements for operating modes for systems with harmonic filter units in accordance with IACS UR E24.
  — Sec.2 [2.1.2], Sec.2 [2.2.1] and Sec.2 [2.2.3]: Clarified the functional requirements for main generators and their capability to start in a blackout situation without recourse to the emergency source of power. For improved clarity, the acceptance of a single dedicated standby generator has been removed.
  — Sec.2 [3.1.1]: Aligned the wording in h) in line with the SOLAS text. The wording "for blackout situations" has been removed, and replaced with "to supply non-emergency circuits".
  — Sec.2 Table 1: Added requirement for emergency lighting for escape routes leading to muster and embarkation stations, as this detail not is covered by SOLAS.
  — Sec.2 [3.1.4]: Clarified the guidance note with a better reference to applicable codes.
  — Sec.2 [3.3.4]: Clarified requirement for overcurrent protection of emergency generator when it is used as a harbour generator.
  — Sec.2 [6.2.2]: Added requirements for lighting controllers, as such now is introduced both for normal and emergency lighting.
  — Sec.2 [6.2.5]: Requirements for duplication of navigation lights are flag state issues, and not covered by the basic class scope. The requirement for duplication of circuits is therefore deleted.
  — Sec.2 [7.1.2]: Strengthened the requirement for audible and visual alarm when there is an insulation fault. Such an alarm is seen as normal today.
  — Sec.2 [7.7.1]: Added requirements for protection and monitoring of harmonic filter units in accordance with IACS UR E24.
  — Sec.2 [8.1.4]: Requirements for control of duplicated consumers has been moved from Sec.4.
  — Sec.2 [8.2.5]: Added clarification of instrumentation requirements to DC sources of power (generator units with a rectifier between the machine and the main busbar).
  — Sec.2 Table 6 and Sec.2 Table 8: Added rating tables for aluminium cables.
• **Sec.3 Equipment in general**  
  — Sec.3 [7.1.1]: Reduced type testing requirements to vibration of heavy equipment.

• **Sec.4 Switchgear and controlgear assemblies**  
  — Sec.4 [2.2.3]: Parts of the paragraph have been moved to Sec.4 [3.1.2].

• **Sec.5 Rotating machines**  
  — Sec.5 Table 1: Table updated in line with IEC 60034-1 2010, (considering marine ambient temperature).  
  — Sec.5 [3]: Added technical requirements for permanent magnet machines.  
  — Sec.5 Table 3: A new table with additional and modified requirements for testing and inspection of propulsion motors and shaft generator.  
  — Sec.5 [4.1.1]: All guidance notes have been transformed into paragraphs.  
  — Sec.5 [4.1.2]: New paragraph about interturn testing.  
  — Sec.5 [4.1.3] and Sec.5 [4.1.4]: Requirements for verification of permanent magnet machines with respect to acceptable types.

• **Sec.6 Power transformers**  
  — Sec.6 [2.1.2]: Clarified that starting transformers not need to be subject to heat rise test.

• **Sec.8 Miscellaneous equipment**  
  — Sec.8 [1.5]: Added requirements for slip ring units.

• **Sec.9 Cables**  
  — Sec.9 [2.3.1] and Sec.9 [2.3.2]: Added acceptance to use aluminium conductors in cables. Minimum cross section 50 mm².

• **Sec.10 Installation**  
  — Sec.10 [3.9.2]: Added requirements for termination kits for aluminium conductors.  
  — Sec.10 [4.4.7]: Added requirement from IACS UR E24, that harmonic distortion shall be measured on board ships with harmonic filters.  
  — Sec.10 [4.4.8]: Rephrased explanatory sentence about why emergency generator shall be disconnected during testing of automatic standby start.

• **Sec.11 Hazardous areas installation**  
  — Sec.11 [3.2.4]: Clarification  
  — Sec.11 [4.2.2]: Added a possibility for isolation of braid inside plastic enclosures in the field.  
  — Sec.11 [4.2.5]: Updated in line with IEC 60079-0 clause 16; All glands and blanking elements shall be covered by an Ex certificate.

• **Sec.12 Electric propulsion**  
  — Sec.12 [1.2.2]: New paragraph clarifying redundancy requirements for electric propulsion.  
  — Sec.12 [1.6.3]: New paragraph for instrumentation of electric propulsion motors. Previously located in Sec.2.
— Sec.12 [1.6.4]: Clarified that door lock monitoring in high voltage assemblies may initiate tripping of the associated circuit.
— Sec.12 [2.1.2]: Added requirement telling that temperatures of major components shall be recorded at sea trial.

**Editorial corrections**

In addition to the above stated changes, editorial corrections may have been made.
Part 4 Systems and components
Chapter 9 Control and monitoring systems
CHANGES – CURRENT

This document supersedes the October 2015 edition.
Changes in this document are highlighted in red colour. However, if the changes involve a whole chapter, section or sub-section, normally only the title will be in red colour.

Main changes January 2017, entering into force 1 July 2017

- General
  — The term control and monitoring is generally replaced with control, monitoring and safety to emphasize that the rules also apply to safety systems.

- Sec.1
  — The description of the classification principles for control, monitoring and safety systems is elaborated and amended to clarify the general requirements for type approval and certification.
  — Sec.1 [1.4.1]: the list of systems to be certified are updated to reflect also the optional class notations.
  — Sec.1 [3.1.3]: the documentation requirements are amended to emphasize the functional failure analysis.
  — Sec.1 Table 6: a software security policy shall be part of the required software quality plan.

- Sec.2
  — Certain requirements related to arrangement and segmentation of field instrumentation are deleted.

- Sec.3
  — Sec.3 [1.1.3]: the requirement for independency between alarm, control and safety systems is amended.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 4 Systems and components

Chapter 10 Steering gear
CHANGES – CURRENT

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Main changes January 2017, entering into force 1 July 2017

• Sec.1 General
  — Sec.1 [5.5.4]: Updated requirement for monitoring of most probable failures - aligned with IACS UR E25.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 5 Ship types

Chapter 4 Passenger ships
**CHANGES – CURRENT**

This document supersedes the January 2016 edition. Changes in this document are highlighted in red colour. However, if the changes involve a whole chapter, section or sub-section, normally only the title will be in red colour.

**Main changes January 2017, entering into force July 2017**

- **Sec.1 General**
  - **Sec.1 [5.1.4]:** Test requirements for glass side walls consisting of more than one element and glass side walls not supported on all four edges have been specified.

- **Sec.2 Hull**
  - **Sec.2 [6.1]:** Acceptance of glass side walls not supported on all four sides has been implemented.

**Editorial corrections**

In addition to the above stated changes, editorial corrections may have been made.
RULES FOR CLASSIFICATION

Ships

Edition January 2017

Part 5 Ship types

Chapter 5 Oil tankers

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CHANGES – CURRENT

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Main changes January 2017, entering into force July 2017

• Sec.1 General
  — Sec.1 Table 3: The definition of cargo area in table 3 has been amended to reflect that it also includes the full depth of the ship.
  — Sec.1 Table 5: In table 5 regarding internal access, additional description has been updated with correct SOLAS reference.
  — Sec.1 Table 7: In table 7 a note has been inserted indicating requirements for EC-MED certificates for P/V-valves on EEA flagged vessels.

• Sec.2 Hull
  — Sec.2 [2.1]: Requirements to inerting, gas freeing and inspection of small voids within the cargo area have been deleted in order to avoid conflicting requirements compared to the common structural rules.

• Sec.3 Ship arrangement and stability
  — Sec.3 [2.1.8]: Has been amended so that cleaning and gas-freeing of small voids within the cargo area is not a requirement.
  — Sec.3 [6.2]: Has been amended to include deck trunks.

• Sec.4 Piping systems in cargo area
  — Sec.4 [2.2.10]: Reference has been corrected.
  — Sec.4 [5.2]: Has been amended to be in compliance with IMO MSC/Circ.474/Corr.

• Sec.5 Gas-freeing and venting of cargo tanks
  — Sec.5 [2.2.13]: Has been amended to reflect USCG-regulations.

• Sec.10 ships for alternate carriage of oil cargo and dry cargo
  — Sec.10 [2.2.4]: Has been amended to include any stool spaces containing cargo pumps and piping.
  — Sec.10 [2.2.5]: Access entrances and passages shall have a clear opening in accordance with Sec.3 [4.2].

• Sec.11 Inert gas system
  — Sec.11 [3.2.4]: Has been amended in accordance with forthcoming IACS unified interpretations to the FSS code.
  — Sec.11 [3.3.1]: Has been amended to clarify which spaces require inert gas in accordance with IACS UI SC272.
  — Sec.11 Table 1: Table 1 has been amended in accordance with FSS code amendments and forthcoming IACS unified interpretations to the FSS code.
Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 5 Ship types
Chapter 6 Chemical tankers
CHANGES – CURRENT

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Main changes January 2017, entering into force July 2017

• Sec.1 General
  — Sec.1 Table 4: Definition of cargo area has been updated to reflect that it also includes full depth of the ship.
  — Sec.1 Table 6: In Table 6, a note has been inserted under additional description indicating requirement for EC-MED certificates for P/V valves for EEA flagged vessels.

• Sec.3 Ship arrangements
  — Sec.3 [5]: Headline has been amended to include deck trunks.
  — Sec.3 [5.1.8]: Requirements for deck trunks according to IMO MSC/Circ.1276 has been introduced.
  — Sec.3 [9.1.3]: Guidance note has been amended.

• Sec.16 Inert gas systems
  — Sec.16 [1.1.1] and Sec.16 [1.1.2]: Text related to deadweight requirements has been rephrased in order to be aligned between 1.1.1 and 1.1.2.
  — Sec.16 [2.2.6]: Requirement to location of nitrogen system components including nitrogen buffer tanks have been amended in accordance with FSS code Ch.15 2.4.1.4.
  — Sec.16 Table 2: Has been amended in accordance with forthcoming IACS unified Interpretation to the FSS code.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 5 Ship types

Chapter 7 Liquefied gas tankers
CHANGES – CURRENT

This document supersedes the July 2016 edition.
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Main changes January 2017, entering into force July 2017

• Sec.20 Design with independent prismatic tanks of type-A and type-B
  — Editorial changes have been implemented.

• Sec.23 Design with membrane tanks
  — Editorial changes have been implemented.
  — Sec.23 [2.2.2] and Sec.23 [2.2.3]: Changes have been made to formula for \( \alpha_{hg} \) due to the change in Pt.3 Ch.4 Sec.2 Table 6, factor for horizontal bending moment from 0.9 to 1.0.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 5 Ship types

Chapter 9 Offshore service vessels
CHANGES – CURRENT

This document supersedes the July 2016 edition. Changes in this document are highlighted in red colour. However, if the changes involve a whole chapter, section or sub-section, normally only the title will be in red colour.

Main changes January 2017, entering into force 1 July 2017

• Sec.2 Offshore service vessels
  — Sec.2 [5.3.1]: Amended ice load on side structures from 15 kg/m$^3$ to 7.5 kg/m$^3$ to be in line with IMO requirements and initial intention/current practice.

• Sec.3 Anchor handling and towing vessels
  — Sec.3: Removed requirement to local operation of deck winches.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
RULES FOR CLASSIFICATION

Ships

Edition January 2017

Part 5 Ship types

Chapter 10 Vessels for special operations
CHANGES – CURRENT

This document supersedes the July 2016 edition.
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Main changes January 2017, entering into force July 2017

• Sec.2 Crane vessels
  — Sec.2 [4.4.4]: Correction has been made to the explanation of $A_{RL}$ and $A_{HL}$.

• Sec.10 Icebreaker
  — Sec.10 [5.1]: Table reference Pt.6 Ch.6 Sec.5 Table 8 has been added to be aligned with Pt.6 Ch.6 Sec.5.
  — Sec.10 Table 1: Minor adjustments have been made to be aligned with IACS Polar class requirements, UR 12.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 5 Ship types
Chapter 12 Fishing vessels
CHANGES – CURRENT

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Main changes January 2017, entering into force July 2017

• Sec.2 Hull
  — Sec.2 [3.1.1]: Modification of the formula for minimum thickness has been made.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 6 Additional class notations

Chapter 2 Propulsion, power generation and auxiliary systems
CHANGES – CURRENT

This document supersedes the July 2016 edition. Changes in this document are highlighted in red colour. However, if the changes involve a whole chapter, section or sub-section, normally only the title will be in red colour.


- Sec.2 Periodically unattended machinery space - E0 and ECO
  - References to SOLAS are standardized and updated.
  - Sec.2 [2.3.3.1]: Requirement to indicate on the bridge when the audible alarm is silenced in the watch-keeping engineer’s cabin is deleted.
  - Sec.2 Table 1: Definitions updated for clarification.
  - Sec.2 [3]: Requirements to alarm systems updated for clarification.
  - Sec.2 [4]: Sec.2 [3.4.1]: Deleted requirements which are covered by main class.
  - Sec.2 [5]: Requirements to internal communication described in a dedicated subsection.
  - Sec.2 [3.1.1]: Added reference to gas turbines.
  - Sec.2 Table 4, Sec.2 Table 13: Updated according to IACS UR M35.
  - Sec.2 Table 8, Sec.2 Table 13: Updated according to IACS M36.

- Sec.5 Gas fuelled ship installations - Gas fuelled
  - Sec.5 [1.3]: The information related to lack of international conventions for the use of gas as fuel in ships is deleted due to entry into force of IGF code.
  - Sec.5 Table 2: The document requirements are updated.
  - Sec.5 Table 3: The additional description is amended with a clarification related to prototype test of expansion bellows.
  - Sec.5 [1.8]: It has been added that the operation manual shall include a description of the boil-off system when installed.
  - Sec.5 [4.2.13]: The text in [4.2.13.2] and [4.2.13.3] is amended for compliance with the IGF code.
  - Sec.5 [4.7.2]: A reference to the fire insulation requirement is added in [4.7.2.3].
  - Sec.5 [5.1.3]: A requirement for thermal stress analysis is added in [5.1.3.15].
  - Sec.5 [5.1.7]: The text in [5.1.7.1] is amended for compliance to the IGF code.
  - Sec.5 [5.1.7]: A requirement is added in [5.1.7.4], related to where expansion bellows are allowed in pipes containing gaseous fuel.
  - Sec.5 [11.7]: Requirement for onboard testing is added.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 6 Additional class notations

Chapter 3 Navigation, manoeuvring and position keeping
CHANGES – CURRENT

This document supersedes the July 2016 edition. Changes in this document are highlighted in red colour. However, if the changes involve a whole chapter, section or sub-section, normally only the title will be in red colour.

Main changes January 2017, entering into force 1 July 2017

- Sec.1 Dynamic positioning systems - DYNPOS and DPS
  - Sec.1 Table 4: It is specified that the redundancy design philosophy document must specify the redundancy groups and dynamic positioning (DP) zone plan with ventilation arrangements.
  - Sec.1 Table 4: Electrical load balance calculations are required to include situations representing failure of each redundancy group.
  - Sec.1 [1.6.6] and Sec.1 [10]: Requirement for station keeping capability assessment changed from "environmental regularity numbers; ern* calculations" to "Station keeping capability calculations according to new DNVGL-ST-0111 Assessment of station keeping capability of dynamic positioning vessels".
  - Sec.1 [1.6.7]: Requirements to the vessel DP failure mode and effect analysis (FMEA) is updated to more clearly specify that an FMEA report, containing the updated FMEA and the updated FMEA test program with actual results shall be submitted for information after trials.
  - Sec.1 [4.6.1] Guidance note 3: Specification that for column stabilized units, watertight separation will be required below the freeboard deck.
  - Sec.1 [4.6.2]: The requirement that watertight separation shall also be provided in areas above the bulkhead deck where large quantity of liquids may occur as a consequence of leakage is moved to a separate rule instead of being a guidance note under the general separation requirement.
  - Sec.1 [8.4.1]: One of the functional requirements to power management systems has been changed from "if load dependent stop of running generators is provided, facilities for disconnection of this function shall be arranged" to "it shall be possible to set a minimum number of connected generator sets in each redundancy group".

- Sec.2 Dynamic positioning system with enhanced reliability - DYNPOS(E,ER)
  - Sec.2 [1.3.2], Sec.2 [1.5.6] and Sec.2 [10]: Requirement for station keeping capability assessment changed from "environmental regularity numbers; ern* calculations" to "Station keeping capability calculations according to new DNVGL-ST-0111 Assessment of station keeping capability of dynamic positioning vessels".
  - Sec.2 Table 3: It is specified that the redundancy design philosophy document must specify the redundancy groups and DP zone plan with ventilation arrangements.
  - Sec.2 Table 3: Electrical load balance calculations are required to include situations representing failure of each redundancy group.
  - Sec.2 [1.5.7]: Requirements to the vessel DP FMEA is updated to more clearly specify that an FMEA report, containing the updated FMEA and the updated FMEA test program with actual results shall be submitted for information after trials.
  - Sec.2 [4.2.2]: It is specified that enhanced reliability DP systems shall in general be based on redundancy groups consisting of two or more equally sized generator sets, and with equal number of generator sets in each group. It is specified that other arrangements might be accepted on special request and will be subject to case-by-case evaluation.
  - Sec.2 [4.5.3]: Specification that for column stabilized units, watertight separation will be required below the freeboard deck.
— **Sec.2 [4.5.4]**: The requirement that watertight separation shall also be provided in areas above the bulkhead deck where large quantity of liquids may occur as a consequence of leakage is moved to a separate rule instead of being a guidance note under the general separation requirement.

— **Sec.2 [8.3.6]**: Rule requirement to battery power and capacity, when batteries are used in combination with stand-by generator sets, are introduced.

— **Sec.2 [8.4.2]**: One of the functional requirements to power management systems has been changed from “if load dependent stop of running generators is provided, facilities for disconnection of this function shall be arranged” to “it shall be possible to set a minimum number of connected generator sets in each redundancy group”.

**• Sec.3 Nautical safety NAUT(OC) and NAUT(AW)**

— **Sec.3 [6.9]**: The requirements for what was previously named bridge alert management system (BAMS) have been updated. The intention is to require a central alert management system compliant with the bridge alert management (BAM) philosophy of IMO as stated in MSC.302(87). In this process previous BAMS requirements have been replaced with requirements for a central alert management system (CAM).

— **Sec.3 [6.9]**: With reference to the above definitions and document requirements have been added and the testing of BAMS is replaced with procedures for CAM.

**• Sec.5 Nautical safety NAUT(OSV)**

— **Sec.5 [4.2.10]**: As in Sec.3. The requirements for what was previously named bridge alert management system - BAMS have been updated in a similar way.

— **Sec.5 [4.2.10]**: The requirement for overlap of window wipers when two sets are used to cover the full height of a window is updated. It is no longer required with an overlap.

**Editorial corrections**

In addition to the above stated changes, editorial corrections may have been made.
Part 6 Additional class notations
Chapter 4 Cargo operations
CHANGES – CURRENT

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Changes in this document are highlighted in red colour. However, if the changes involve a whole chapter, section or sub-section, normally only the title will be in red colour.

Main changes January 2017, entering into force July 2017

• Sec. 7 Loading computer systems for stability and longitudinal strength
  — General clarification of the term integrated system throughout the document.
  — Sec.7 [1]: Editorial changes have been made in scope and application of rules.
  — Sec.7 [1.7.1]: Previous definition of calculation system has been removed, as it was not used.
  — Sec.7 [1.7.1]: New software type 4 for damage control software has been added, in line with upcoming IACS UR L5 revision. This is further reflected in Sec.7 [1.8.7], and Sec.7 [1.12.6], which describes requirement for approval and software setup and output.
  — Sec.7 [1.8.4]: Reference to new IMO MSC.1/Circ. 1532 has been updated in guidance note.
  — Sec.7 [1.9.1]: Clarification on requirement for printing devices onboard has been made.
  — Sec.7 [1.10.3]: Extended definition of printouts has been made, to also cover electronically stored files.
  — Sec.7 [1.10.11]: A guidance note has been added on how to set up the checking of draught the load line mark, including seasonal marks.
  — Sec.7 [1.10.12]: Optional setting of multiple load line marks in the computer has been added.
  — Sec.7 [1.11.3]: Update has been made to method for displaying percentage of bending moments in case upper and lower limit is positive. In the new method, the percentage is utilized from 0 to 100 % instead of 50 to 100 % as was the case before.
  — Sec.7 [1.12.2]: New item has been added, regarding option for replacing actual free surface moment with the maximum for individual tanks.
  — Sec.7 [4.4.3]: New requirement for LCS(DC) prohibiting equipment that will fail if flooded to be located in compartments subject to damage has been added.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 6 Additional class notations
Chapter 5 Equipment and design features
CHANGES – CURRENT

This document supersedes the July 2016 edition.
Changes in this document are highlighted in red colour. However, if the changes involve a whole chapter, section or sub-section, normally only the title will be in red colour.

Main changes January 2017, entering into force 1 July 2017

• Sec.1 Transportation of containers - Container
  — Sec.1 [2], Sec.1 [3], Sec.1 [4]: Additional sub-sections covering requirements to non-typical container securing arrangements have been added to the class notation Container.

• Sec.5 Helicopter installations - HELDK
  — Sec.5 [1.10.4]: Added clarification that aluminum-steel transition joints (bi metallic connections) are not permitted when exposed to tensile loads.
  — Sec.5 [5.2.3]: Requirement for deck cambering is replaced with a general requirement for the deck to be constructed so that water/liquids will not accumulate on the deck.

• Sec.16 Offshore gangway installations - Walk2work
  — New class notation

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 6 Additional class notations

Chapter 6 Cold climate
CHANGES – CURRENT

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Main changes January 2017, entering into force 1 July 2017

• Sec.1 Basic ice strengthening - Ice
  — Sec.1 [9.2.2]: Correction of error in formula for ice class reinforcement factor $C_{EW}$ has been made.

• Sec.5 Polar class - PC
  — Sec.5 [1.3]: Subparagraphs [1.3.2], [1.3.3] and [1.3.4] have been added to be aligned with IACS UR I1.
  — Sec.5 [4.1.5]: Paragraph has been modified to be aligned with IACS UR I2.
  — Sec.5 [4.1]: Subparagraphs [4.1.6], [4.1.7] and [4.1.8] have been added to be aligned with IACS UR I1.
  — Sec.5 Table 4: Class factors have been added to be aligned with IACS UR I2.
  — Sec.5 [4.3.4]: Bow area characteristics for bow forms defined in [4.1.6], have been added to be aligned with IACS UR I2.
  — Sec.5 Table 5: Table has been modified to include a row for frames in bottom structures.
  — Sec.5 [5.3.1]: Clarification of application of patch load on bottom stiffeners has been added to be aligned with IACS UR I2.
  — Sec.5 [5.5]: Effective net web area and net elastic section modulus requirements for frames and load carrying stringers are deleted and direct calculation, as an alternative, has been addressed.
  — Sec.5 [6.1]: New subparagraph, [6.1.2], has been introduced to exclude which are designed with a vertical or bulbous bow.
  — Sec.5 [8.1]: Direct calculation sub-section has been rearranged and modified by adding subparagraphs to include more clarifications and acceptance criteria.
  — Sec.5 [10.2.2]: Material class requirements in table 12 have been stepped down to be aligned with IACS UR I2.
  — Sec.5 Table 13: Table for steel grades for inboard framing members attached to weather exposed plating, have been deleted to be aligned with IACS UR I2.
  — Sec.5 [10.2]: Paragraph [10.2.5] has been deleted to be aligned with IACS UR I2.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
RULES FOR CLASSIFICATION

Ships

Edition January 2017

Part 6 Additional class notations

Chapter 7 Environmental protection and pollution control

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CHANGES – CURRENT

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Main changes January 2017, entering into force as from date of publication

• Sec.1 Ballast water management - BWM
  — Sec.1 [2.6.1] and Sec.1 [2.4.2]: Ballast water management plans including sequential exchange of ballast water will not be required to include detailed calculations if an approved loading computer is onboard. In case a detailed calculation is to be submitted, only the most critical condition need to be included.

• Sec.2 Environmental class - Clean
  — Sec.2 [1.1] and Sec.2 [1.2]: Qualifiers for the class notation Clean are added: Clean(Tier III) and Clean(Design, Tier III).

• Sec.3 Fuel and lubrication oil systems and arrangement for meeting regulations in emission control areas - ECA
  — Sec.3 [1.3]: Sentence included to ensure that ECA SOx notation formally can be given to e.g. ships with gas fuel or scrubbers.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 6 Additional class notations
Chapter 9 Survey arrangements
CHANGES – CURRENT

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Amendments January 2017

• Sec.2 Enhanced survey program - ESP
  — Alignment with wording in UR Z11 Mandatory Ship Type and Enhanced Survey Programme (ESP) Notations to clarify ESP requirements for self-unloading bulk carriers and combination carriers.

Main changes July 2016, entering into force 1 January 2017

• Sec.5 Tailshaft monitoring - TMON
  — Sec.5 [1.3.1]: New qualifier for oil introduced - TMON(Oil lubricated)
  — Sec.5 [2.1.2]: Requirement for additional temperature sensor for forward stern tube bearing removed
  — Sec.5 [2.2.1][3] and Sec.5 [2.3.1][4]: Added requirement for spare sensor when a single sensor is installed. New guidance included to provide guidance on type approval of the sensor
  — Sec.5 Table 5 and Sec.5 Table 6: Removed requirement for autostart of stand-by pump upon low pressure
  — Sec.5 [2.3.2][1] and Sec.5 [2.3.2][2]: Previous guidance note text changed to rule text.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.
Part 7 Fleet in service

Chapter 1 Survey requirements for fleet in service
CHANGES – CURRENT

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Main changes January 2017, entering into force 1 July 2017

• Sec.1 General requirement
  — Intermediate survey for POSMOOR notation removed.

• Sec.2 Annual surveys extent - main class
  — Sec.2 [1.2.12]: Added verification by surveyor of overdue PCS deficiencies.
  — Sec.2 [3.1.5]: New requirements introduced for periodical (annual) follow up of monitoring of harmonic distortion from harmonic filters, where such are installed.
  — Sec.2 [3.1.9]:
    — added requirement for wall thickness measurement for overboard distance piece
    — added requirement for annual external visual inspection of inline scrubbers exhaust inlet welds, applicable where bypass is not fitted.

• Sec.4 Renewal surveys extent - main class
  — Sec.4 [3.1.16]:
    — added requirement for internal and external inspection of inline scrubbers exhaust inlet welds, applicable where no bypass is fitted
    — added requirement for testing of safety sensors.

• Sec.5 Miscellaneous main class surveys
  — Sec.5 [1.5.1]: New guidance note added
  — Sec.5 [6.1.3]: “Direct visual” included in guidance note to clarify the intention of the internal inspection referred to in the rule text.

• Sec.6 Optional class notation surveys
  — Sec.6 [12]: The sub-section is rewritten and updated to cover all dynamic positioning class notations.
  — Previous sub-section [36] Dynamic positioning systems - enhanced reliability is deleted and the notations DYNPOS(E) and DYNPOS(ER) are now covered by sub-section Sec.6 [12].

• Sec.7 Alternative survey arrangements
  — Sec.7 [3.2.3(e)]: Class notation AUT added.

Editorial corrections

In addition to the above stated changes, editorial corrections may have been made.