

Rules for Building and Classing

Marine Vessels

Notices and General Information



January 2025



RULES FOR BUILDING AND CLASSING

MARINE VESSELS JANUARY 2025

NOTICES AND GENERAL INFORMATION

**American Bureau of Shipping
Incorporated by Act of Legislature of
the State of New York 1862**

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Notices and General Information

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Notices and General Information

Introduction

1. The 2025 edition of the *Rules for Building and Classing Marine Vessels* consists of the Parts as shown in Table 1. Reference is made in these Rules to the following generic Rules:
 - a) *Rules for Conditions of Classification (Part 1A)* includes consolidated requirements for “Classification” applicable to all types of and sizes of vessels, barges and specific shipboard arrangements/systems, etc., except for those in offshore service, as specified in the Foreword to Part 1A. Additional specific requirements are contained in Chapter 5 of Part 1A.
 - b) *Rules for Alternative Arrangements, Novel Concepts and New Technologies (Part 1D)* introduces a procedure for acceptance of alternative arrangements, novel concepts, and new technologies based on Goals and Functional Requirements, including a consolidated list of Tier 1 Goals.
 - c) *Rules for Materials and Welding (Part 2)* contains materials requirements common to ABS-classed vessels, other marine structures and their associated machinery, including steel, aluminum, and FRP materials.
 - d) *Rules for Survey After Construction (Part 7)* contains consolidated requirements for “Surveys After Construction” applicable to all types and sizes of vessels, barges and specific shipboard arrangements/systems, etc., as specified in Part 7, Chapter 1, Section 1.
2. The numbering system applied in the Rules is shown in Table 2.
3. The primary changes from the July 2024 Rules are identified and listed in Table 3. The effective date of the indicated Rule Changes is 1 January 2025, unless specifically indicated otherwise.

For certain changes that have a major impact on shipyards, designers and vendors, ABS has instituted a two-year Rule cycle to give the industry more time to prepare for these changes. The text of these changes will appear in a box along with the effective date just under the existing Rule requirement.

4. In association with the harmonization of the Common Structural Rules (CSR) for Bulk Carriers and Oil Tankers, on 1 July 2015, the three Sub-parts, 5A, 5B, and 5C, of Part 5 of the *Rules for Building and Classing Marine Vessels* are as follows:

Contents

Part 5A: General Hull Requirements (IACS CSR Part 1)

Part 5B: Ship Types (IACS CSR Part 2)

Part 5C: This Part is divided into two separate booklets as follows:

Chapters 1 to 6: Tankers and Bulk Carriers not covered by Part 5A and Part 5B and Container Carriers

Chapters 7 to 22: Passenger Vessels, Liquefied Gas Carriers, Chemical Carriers, Vessels Intended to Carry Vehicles, Vessels Intended to Carry Liquid Cargoes in Bulk (other than Oil or Chemical), Membrane Tank LNG Carriers, Vessels Using Gases or other Low-Flashpoint Fuels, Fire Fighting Vessels, Oil Recovery Vessels, Escort Vessels, Vessels Under 90 m (295 ft) Intended for Towing, Fishing Vessels, Box-Shaped Bulk Carriers, General Dry Cargo Vessels, Heavy Lift Ships, and Anchor Handling Vessels.

Part 5D: Offshore Support Vessels for Specialized Services

Application – Oil Tankers

The structural requirements in Part 5A, Pt 1 and Part 5B, Pt 2, Ch 2 of the Rules are applicable for double hull oil tankers of 150 m in length and upward, with structural arrangements as specified in Part 5A, Pt 1, Ch 1, Sec 1, [1.3].

For oil tankers with structural arrangements not covered by Part 5A, Pt 1 and Part 5B, Pt 2, Ch 2, the requirements in Part 5C, Chapters 1 or 2, are to be complied with.

Application – Bulk Carriers

The structural requirements in Part 5A, Pt 1 and Part 5B, Pt 2, Ch 1 of the Rules are applicable for single side skin and double side skin bulk carriers of 90m in length and upward, with structural arrangements as specified in Part 5A, Pt 1, Ch 1, Sec 1, [1.2].

For vessels intended to carry ore or bulk cargoes, other than the single side skin or double side skin bulk carriers of 90 m in length and upward with structural arrangements as specified in Part 5A, Pt 1 and Part 5B, Pt 2, Ch 1, the requirements in Part 5C, Chapters 3 or 4 are to be complied with.

Application – ABS Construction Monitoring Program

These compulsory requirements for **CSR** notation are specified in Part 5C, Appendix 1, Section 2.

Application – Onboard Systems for Oil Tankers and Bulk Carriers

The onboard systems for all tankers are to comply with the requirements of Part 5C, Chapter 2, Section 3, and for all bulk carriers are to comply with the requirements of Part 5C, Chapter 3, Section 7 of the Rules.

Application – References

Other Parts of the ABS Rules that are referenced within Part 5A, 5B, 5C, and 5D are also to be applied.

The following flow chart indicates the application of the Rules and typical Class Notations for tanker and bulk carrier vessels, of which arrangements and scantlings are in full compliance with the Rules:

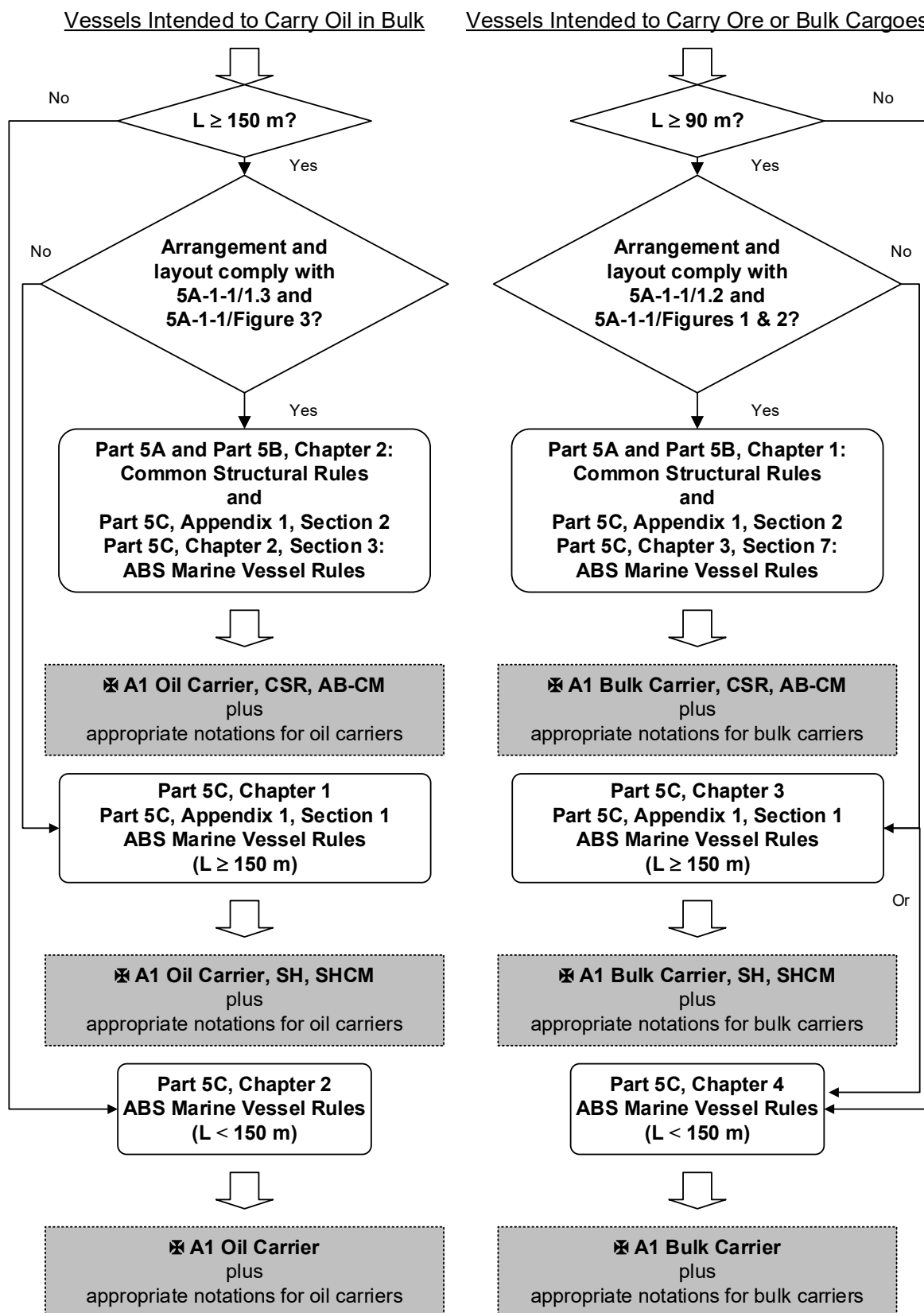


TABLE 1
Applicable Editions of Parts Comprising January 2025 Marine Vessel Rules

Notices and General Information		January 2025
Part 1A:	Rules for Conditions of Classification	January 2025
Part 1D:	Rules for Alternative Arrangements, Novel Concepts and New Technologies	January 2024
Part 2:	Rules for Materials and Welding Rules for Testing and Certification of Materials Rules for Welding and Fabrication	January 2025
Part 3:	Hull Construction and Equipment	January 2025
Part 4:	Vessel Systems and Machinery	January 2025
Part 5A:	Specific Vessel Types General Hull Requirements (IACS CSR Part 1)	January 2025
Part 5B:	Specific Vessel Types Ship Types (IACS CSR Part 2)	January 2025
Part 5C:	Specific Vessel Types Chapter 1 General Hull Requirements for SafeHull Vessels (New) Chapter 2 Oil Carriers Chapter 3 & 4 Bulk Carriers Chapter 5 & 6 Container Carriers Chapter 7 Passenger Carriers Chapter 8 Liquefied Gas Carriers Chapter 9 Chemical Carriers Chapter 10 Vehicle Carriers Chapter 11 Vessels Intended to Carry Liquid Cargoes in Bulk (other than Oil or Chemical) Chapter 12 Liquefied Gas Carrier with Membrane Tanks Chapter 13 Vessels Using Gases or other Low-Flashpoint Fuels Chapter 14 Fire Fighting Vessels Chapter 15 Oil Recovery Vessels Chapter 16 Escort Vessels Chapter 17 Vessels Under 90m (295 ft) Intended for Towing Chapter 18 Fishing Vessels Chapter 19 Vessels Intended to Carry Bulk Cargoes without Upper Wing Tanks and Lower Wing Tanks Chapter 20 General Dry Cargo Vessels Chapter 21 Heavy Lift Ships Chapter 22 Anchor Handling Vessels	January 2025

Part 5D:	Offshore Support Vessels for Specialized Services	January 2025
	Chapter 1 Vessels Intended for Offshore Support Services	
	Chapter 2 Offshore Supply	
	Chapter 3 Anchor Handling and Towing	
	Chapter 4 Fire Fighting	
	Chapter 5 Diving and Remotely Operated Vehicles (ROVs) Support	
	Chapter 6 Oil Spill Recovery	
	Chapter 7 Safety Standby Rescue	
	Chapter 8 Pipe Laying	
	Chapter 9 Heavy Lift	
	Chapter 10 Well Intervention	
	Chapter 11 Well Stimulation	
	Chapter 12 Well Test	
	Chapter 13 Escort	
	Chapter 14 Wind Turbine Installation, Maintenance and Repair (Wind IMR)	
	Chapter 15 Cable Laying	
	Chapter 16 Subsea Services	
Part 6:	Specialized Items and Systems	January 2025
	Chapter 1 Strengthening for Navigation in Ice	
	Chapter 2 Refrigerated Cargo Vessels	
	Chapter 3 Exhaust Emission Abatement	
	Chapter 4 Low and High Voltage Shore Connection	
	Chapter 5 Alternative Fuels	
	Chapter 6 Ballast Water Treatment (New)	
Part 7:	Rules for Survey After Construction	January 2025

TABLE 2
Division and Numbering of Rules

<i>Division</i>	<i>Number</i>
Part	Part 1
Chapter	Part 1, Chapter 1
Section	Section 1-1-1
Subsection (see Note 1)	1-1-1/1
Paragraph (see Note 1)	1-1-1/1.1
Subparagraph	1-1-1/1.1.1
Item	1-1-1/1.1.1(a)
Subitem	1-1-1/1.1.1(a)i
Appendix	Appendix 1-1-A1 or Appendix 1-A1-1

Note:

1

An odd number (1, 3, 5, etc.) numbering system is used for the Rules. The purpose is to permit future insertions of even-numbered paragraphs (2, 4, 6, etc.) of text and to avoid the necessity of having to renumber the existing text and associated cross-references, as applicable, within the Rules and associated process instructions, check sheets, etc.

Rule Change Notice (2025)

TABLE 3
Summary of Changes from the July 2024 Rules

EFFECTIVE DATE 1 January 2025 – shown as (2025)

<i>Part/Para. No.</i>	<i>Title/Subject</i>	<i>Status/Remarks</i>
PART 1A	Rules for Conditions of Classification	
1A-1-4/7.7.6	Rules for Classification	To update the definition of "component" in 1-1-4/7.7.6 to be in line with IACS UR M44 and other ABS publications.
1A-7-5	Manuals	To update the requirements for manuals based on Rules Changes to Section 6 of the Underwater Vehicles Rules.

EFFECTIVE DATE 1 January 2025 – shown as (2025)
(based on the date of purchase order of the materials)

<i>Part/Para. No.</i>	<i>Title/Subject</i>	<i>Status/Remarks</i>
PART 2	Materials and Welding	
2-3-14/7.1, Table 3, Figure 8, 9.5.1, 9.5.2, 17.1	Bronze Castings	To incorporate update of IACS UR W24 Cast copper alloy propellers (Rev 5).
2-3-15/17.13	Stainless Steel Propeller Castings	To incorporate IACS UR W27 Cast Steel propellers updates.
2-6-4/3.17	Quality Control	To update the definition of "Audit" in 2-6-4/3.17 to be in line with other ABS publications.

EFFECTIVE DATE 1 January 2025 – shown as (2025)
(based on the contract date for new construction between builder and Owner)

<i>Part/Para. No.</i>	<i>Title/Subject</i>	<i>Status/Remarks</i>
PART 3	Hull Construction and Equipment	
3-2-3/3.7, Table 1	Decks	To align deck plating requirements with under 90 meter rules and clarify notes.
3-2-13/9.5	Stems, Stern Frames, Rudder Horns, and Propeller Nozzles	To clarify the requirements for the calculation of the offered section modulus to apply MVR 3-2-14/23.17 and 3-2-13/9.5.
3-2-17/Table 7, 9.7.2	Bulwarks, Rails, Freeing Ports, Side Scuttles, Ventilators, Tank Vents and Overflows	To further refine the requirements for window glazing and laminated glass, based on current ABS practice,
3-2-19/Table 1 item X	Weld Design	To align weld factors for external bulkheads of higher tiers and internal bulkheads of deckhouses with CSR.
3-2-A4/1	Buckling Strength of Longitudinal Strength Members for Vessels Over 61 m (200 ft) in Length	To clarify that UR S11 buckling checks are not required for SafeHull vessels in line with established practice.
PART 4	Vessel Systems and Machinery	
4-1-1/7.9, Table 7	Classification of Machinery	To ensure clarity of the static and dynamic inclinations that the machinery is expected to perform at, based on IACS UR M46 REV.3 AUGUST 2023.
4-1-1/Table 3, Table 4	Classification of Machinery	To add computer-based UPS, Circuit breakers, Fire detection and Alarm Panels to the certification list in 4-1-1/Table 3, Table 4.
4-2-1/1.3.3	Internal Combustion Engines	To update the definition of "Rated Power" in 4-2-1/1.3.3 to be in line with other ABS publications.
4-2-1A1/Annex 1	Documentation for the approval of internal combustion engines	To update the definition of "Audit" in 4-2-1A1/Annex 1 - Glossary to be in line with other ABS publications.

<i>Part/Para. No.</i>	<i>Title/Subject</i>	<i>Status/Remarks</i>
4-2-1A11	Guidance for Spare Parts	To update Appendix 11 "Guidance for Spare Parts" based on IACS Recommendation 26 Rev.2.
4-2-3/7.7.1	Gas Turbines	To add MVR 4-9-3 cross-reference to MVR 4-2-3/7.7.1.
4-3-2/7.3.4 i), Table 5	Propulsion Shafting	To specify that the bore sighting after the installation of complete stern tube assembly in the stern tube block by resin chocking is required and to delete requirement in Table 5 for oil temperature monitoring and display for oil flow, pressure or DPS as per current practice by shipyards.
4-3-3/9.11	Propellers	To update CPP Control System Testing Requirements based on implementation of IACS UR M83 (New) Testing of the control system of controllable pitch propellers intended for main propulsion.
4-3-4/1.5.2	Steering Gears	To clarify "For the purpose of alternative steering arrangements, electric steering motors are to be considered as part of the power unit and actuator.", changed "actuator" to "rudder actuator" to be in line with other ABS publications.
4-3-5/7.1	Thrusters	To add cross-reference to MVR 4-9-3 "Computer-based Systems" to MVR 4-3-5/7.1.
4-3-7/1.3.2, 1.5.6, 11	Propulsion Redundancy	To remove requirement for physical segregation since only high level redundancy notation (equivalent to ABS R1-S or R2-S) require physical segregation for fire consideration and to update the definition of "Steering System" in 4-3-7/1.5.6 in line with other ABS publications.
4-4-1-A1/7 Figure 8	Rules for Design	To clarify the required area A under With Reinforcing Element in figure 8.
4-5-1/5.3, 7.3 ii)	Anchor Windlass	To clarify that the hydraulic pumps and hydraulic motors for windlasses are to be certified by the Surveyor at manufacturers' plants.
4-6-1/Table 1	General Provisions	To update Table 1 based on new requirements in IACS UR P2.2 REV.5 OCTOBER 2023.
4-6-2/5.5.5(d), 5.9.1(k)iii), 7-3-4, Table 11, Table 12	Metallic Piping	To align the Rules with requirements in IACS UR P2.7.3 REV.3, P2.7.4 REV.11, P2.9 REV.3, P2.11 REV.6.
4-6-2/5.7.3(b)	Metallic Piping	To cross-reference 4-6-2/5.9 for mechanical joint requirements when mechanical joints are used as hose end fittings, in line with P2.12.3.2 of IACS UR P2.
4-6-2/5.7.3(b)	Metallic Piping	To specify that the design pressure rather than the working pressure should be the key parameter regarding the related requirements.
4-6-2/9.13.1	Metallic Piping	To remove "Commentary" in MVR 4-6-2/9.13.1 "Shell Connections" as these are mandatory requirements and not recommendations which have been added in the main text.
4-6-4/5.5.5(b)	Ship Piping Systems and Tanks	To add Commentary for the requirements to use a pump located outside the Propulsion Machinery Space as the emergency bilge suction based on current ABS practice.
4-6-4/7.7	Ship Piping Systems and Tanks	To modify the cross-reference in 4-6-4/7.7 due to the incorporation of the ABS Ballast Water Treatment Guide into Part 6, Chapter 6.
4-6-4/9.5.2	Ship Piping Systems and Tanks	To add requirements for overflow pipe area when the tank is not filled by a pump pressure.
4-6-4/13.5.1(a)	Ship Piping Systems and Tanks	To update the wording to be in line with MSC. 1/Circ.1322 and SOLAS.
4-6-5/9.3.1	Piping Systems for Internal Combustion Engines	To align the Rules with IACS UR M61 REV.2 AUGUST 2023.
4-6-6/7.1.2	Piping Systems for Steam Plants	To align the Rules with IACS UR M24 REV.2 AUGUST 2023.
4-7-3/1.5.3	Fire-extinguishing Systems and Equipment	To add reference to MSC.1/Circ.1388, similar to 4-7-3/A4 of the Steel Vessel Rules.
4-8-1/5.3.2(b)	General Provisions	To delete a duplicated requirement.

<i>Part/Para. No.</i>	<i>Title/Subject</i>	<i>Status/Remarks</i>
4-8-3/3.14.1 x), 5.11.3	Electrical Equipment	To delete the requirement for the ship's crew to demonstrate the procedure to disconnect the shaft generator rotor hub from the propulsion shaft, since the ship's crew is not available before delivery to demonstrate the procedure and to update test voltages in 4-8-3/5.11.3 Dielectric Strength Test table in accordance with IEC 61439-1.
4-8-3/9.1	Electrical Equipment	To delete the Note of MVR 4-8-3/9.1 since, current requirement which refers to IEC 60092-350 clause 3.16 and clause 4.6 appears more stringent pertaining to inner sheath and to update Goal FIR-2 and Functional Requirement FIR-FR3 for clarity.
4-8-3/9.5	Electrical Equipment	To specify the acceptable fire stop arrangements
4-8-4/5.3.1(b)	Shipboard Installation and Tests	To add an exemption of interlock arrangement between the battery charger and the power ventilation system with conditions specified in Commentary 1.
4-8-4/7.1.2	Shipboard Installation and Tests	To clarify the scope of the switchboard for which the non-conducting mats or gratings are to be provided.
4-9-5/15.3.1	ACC Notation	The requirements for two level sensors in each bilge well is being deleted based on feedback from shipyards that ABS is more stringent than other class societies.
PART 5C	Specific Vessel Types	
5C-1-7/3.3.4(a), 5.3.2(a) & 31	Cargo Oil and Associated Systems	To align the Rules with IACS UR F15 Rev.7 "Reinforced Thickness of Ballast and Cargo Oil Piping" and on IACS UI SC70 Rev.4 Corr. 1 "Cargo tank vent systems and selection of electrical equipment"
5C-8-20 (New)	LNG Cargo Ready Vessels	To merge Guide for LNG Cargo Ready Vessels to Marine Vessel Rules.
5C-8-5/13.1.3 & 13.1.4	Process Pressure Vessels and Liquid, Vapour, and Pressure Piping Systems	To update the Rules due to Implementation of the new requirements in IACS UR G3 REV.8 to address liquefied gas carrier gas/liquefaction/refrigeration compressors in addition to cargo pumps.
5C-8-A7	Dual Fuel Diesel and Single Gas Fuel Engines (ABS)	To update the Rules based on IACS UR M78.
5C-9-1/3.28 (ABS), 3.38	General (ABS)	To update the definition of "Pressure Tank" and "Vapour Pressure" in 5C-9-1/3.28 (ABS) and 5C-9-1/3.38, respectively, to be in line with other ABS publications.
5C-10-4/3.7.2 (b)	Cargo Safety	To reflect SOLAS Reg. II-2/20.3.2.2. and clarify "openings requirements".
5C-13-10/1.1	Power Generation Including Propulsion and other Gas Consumers	To revise Subsection 1 based on IACS UR M78, Rev 2.
5C-17-1/3.1.1, 5	General	To clarify application of the BP notation to Towing Vessels, clarify that the BP Notation is mandatory for Towing Vessels, and require Bollard Pull testing on all vessels.
PART 5D	Offshore Support Vessels for Specialized Services	
5D-1-1/3.1	General	To update the definition of "Offshore Support Vessel" in 5D-1-1/3.1 to be in line with other ABS publications.
5D-3-1/5, 5.5, 9.1	General	To clearly identify the BP notation as a Notation rather than a Record Entry, require Bollard Pull testing on all vessels, and to update the definition of "Static Bollard Pull (BP)" in 5D-3-1/9.1 in line with other ABS publications.
5D-3-5/5	Tests	To update the Bollard Pull units to metric tons in accordance with current practice.
5D-4-2/3.5	Seakeeping	To clarify the additional factors to be considered on the alarm setting and the control requirements for scenarios where fire pumps are powered through power-take-off mechanism from propulsion shaft(s) or from the same electric power plant which is the source for vessel's propulsion or position keeping machinery.
5D-6-2/5, 9, 11, 15	Definitions	To update the definitions of "Cargo Area", "Hazardous Area", "Machinery Space", and "Pump Room" in 5D-6-2/5, 5D-6-2/9, 5D-6-2/11 and 5D-6-2/15, respectively, to be in line with other ABS publications.
5D-6-4/9.1.1	Machinery Equipment and Systems	To update the definition of "Hazardous Area" in 5D-6-4/9.1.1 to be in line with other ABS publications.

<i>Part/Para. No.</i>	<i>Title/Subject</i>	<i>Status/Remarks</i>
5D-12-1/5.1	General	To update the definition of "Well Test Systems" in 5D-12-1/5.1 to be in line with other ABS publications.
5D-13-1/5	General	To clearly identify the BP notation as a Notation rather than a Record Entry, require Bollard Pull testing on all vessels.
5D-13-3/3	Definitions	To update the definition of "Static Bollard Pull (BP)" in 5D-13-3/3 to be in line with other ABS publications.
PART 6	Specialized Items and Systems	
6-2-1/13.21, 13.23, 13.23.4, 13.25	General	To update the definitions of "Refrigerated Edible Bulk Liquid Tankers", "Cargo Containment System", "Pressure Tank", and "Refrigerated Fish Carrier" in 6-2-1/13.21, 6-2-1/13.23, 6-2-1/13.23.4, and 6-2-1/13.25 respectively, to be inline with other ABS publications.
6-2-14/7	Refrigerated Edible Bulk Liquid Tanker	To update the definition title of "Cargo Containment System" in 6-2-14/7 to be inline with other ABS publications.
6-3-1/9.3	General	To incorporate Guide for SOx Scrubber Ready Vessels into Part 6 Chapter 3 of the Marine Vessel Rules.
6-3-2/2.4,14,17.9	EGC – SOx Scrubbers	To incorporate Guide for SOx Scrubber Ready Vessels into Part 6 Chapter 3 of the Marine Vessel Rules.
6-4-1/5	General	To clarify that LVSC is an optional classification notation. The requirement for connecting shore power directly to the onboarding switchboard is moved from MVR 4-8-2/11.1.1 to MVR 6-4-1/11.
6-4-2/31	System Design	To relocate the shore power system cable design requirement from MVR 4-8-2/11.1.1 to MVR 6-4-2/31.
6-4-3/11.3	Equipment Design	To relocate the instrumentation requirement for shore power connection from MVR 4-8-2/11.1.4 to MVR 6-4-3/11.3.
6-4-4/5.5	Installations	To add cross-reference to MVR 4-8-4/21 for HV shore power cable installation.

Part 7 “Rules for Survey After Construction”

The reference date which is indicated in the parentheses following the title of the requirement in this Part is the date that the requirement becomes effective [e.g., 7-5-1/3.1, 3.5 “Survey Requirements” (2025) is to apply for vessels undergoing survey on or after 1 January 2025].

EFFECTIVE DATE 1 January 2025 – shown as (2025)

<i>Part/Para. No.</i>	<i>Title/Subject</i>	<i>Status/Remarks</i>
PART 7	Rules for Survey After Construction	
7-5-1/3.1, 3.5	Survey Requirements	To update the definitions of "Shaft" and "Tube Shaft" in 7-5-1/3.1 and 7-5-1/3.5, respectively, to be in line with other ABS publications.
7-9-45/7.1.2, 7.1, 7.3, 7.5 and 7.7	Lifting Appliances	To update requirements for Annual and Retesting Hydraulic Elevators surveys, and add requirement for service engineer in line with current ABS practice.
7-A1-4/Table 3	Additional Information on Hull Thickness Measurement	To expand the application of the table to aluminum vessels with lengths greater than 90 meters.
7-A1-14	Surveys Based on Preventative Maintenance Techniques	Addition of PMP-MS to the PM Appendix-Section 14.
7-A1-16	Surveys for Smart Function Systems without PMP Notation	To outline the annual survey requirements for Smart Function systems not enrolled in PMP and to be in alignment with the Smart Guide.