



RULES FOR BUILDING AND CLASSING

STEEL VESSELS UNDER 90 METERS (295 FEET) IN LENGTH 2017

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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Introduction

1. The year 2017 edition of the *Rules for Building and Classing Steel Vessels Under 90 meters (295 feet) in Length* consists of the eight (8) booklets as shown in Table 1. With regard to three booklets, Part 1, Part 2, and Part 7:
 - a) The purpose of the generic title *ABS Rules for Conditions of Classification (Part 1)* is to reflect the expanded contents of PART 1, as a result of including 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 1. Additional specific requirements are contained in Part 1 of these *Rules for Building and Classing Steel Vessels Under 90 meters (295 feet) in Length*
 - b) The purpose of the generic title *ABS Rules for Materials and Welding* of PART 2 is to emphasize the common applicability of the requirements to ABS-classed vessels, other marine structures and their associated machinery, and thereby make PART 2 more readily a common “PART” of various ABS Rules and Guides, as appropriate.
 - c) The purpose of the generic title *ABS Rules for Survey After Construction (Part 7)* is to reflect the expanded contents of PART 7, as a result of including 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 2016 edition of the Rules are identified and listed in Table 3. The effective date of the indicated Rule Changes is 1 January 2017, unless specifically indicated otherwise.
4. The effective date of each technical change since 1993 is shown in parenthesis at the end of the subsection/paragraph titles within the text of each Part. Unless a particular date and month are shown, the years in parentheses refer to the following effective dates:

(2000) and after	1 January 2000 (and subsequent years)	(1996)	9 May 1996
(1999)	12 May 1999	(1995)	15 May 1995
(1998)	13 May 1998	(1994)	9 May 1994
(1997)	19 May 1997	(1993)	11 May 1993
5. Until the next edition of the *Rules for Building and Classing Steel Vessels Under 90 meters (295 feet) in Length* is published, Rule Change Notices and/or Corrigenda, as necessary, will be published on the ABS website – www.eagle.org – only, and will be available free for downloading. It is not intended to publish hard copies of future Rule Change Notices and/or Corrigenda to existing Rules or Guides. The consolidated edition of the *Rules for Building and Classing Steel Vessels Under 90 meters (295 feet) in Length*, which includes Rule Change Notices and/or Corrigenda using different colors for easy recognition will be published on the ABS website only when RCN and/or Corrigenda are issued.
6. The listing of CLASSIFICATION SYMBOLS AND NOTATIONS is available from the ABS website www.eagle.org for download.

TABLE 1
Applicable Editions of Booklets Comprising 2016 Rules

Notices and General Information		2017
Part 1:	Rules for Conditions of Classification ⁽¹⁾	2017 ⁽²⁾
Part 1:	Conditions of Classification (Supplement to the ABS <i>Rules for Conditions of Classification</i>) ⁽¹⁾	2017
Part 2:	Rules for Materials and Welding Rules for Testing and Certification of Materials Rules for Welding and Fabrication	2017 ⁽²⁾
Part 3:	Hull Construction and Equipment	2017
Part 4:	Vessel Systems and Machinery	2017
Part 5:	Specialized Vessels and Services Chapter 1 Vessels Intended for Navigation in Ice Chapter 2 Vessels Intended to Carry Oil in Bulk Chapter 3 Vessels Intended to Carry Ore or Bulk Cargoes Chapter 4 Vessels Intended to Carry Liquefied Gases and Chemical Cargoes Chapter 5 Vessels Intended to Carry Passengers Chapter 6 Vessels Intended to Carry Containers Chapter 7 Vessels Intended to Carry Vehicles Chapter 8 Fire Fighting Vessels Chapter 9 Oil Recovery Vessels Chapter 10 Escort Vessels Chapter 11 Vessels Intended for Towing Chapter 12 Fishing Vessels	2017
Part 7:	Rules for Surveys After Construction	2017 ⁽²⁾

Notes:

- 1 The requirements for conditions of classification are contained in the separate, generic *ABS Rules for Conditions of Classification (Part 1)*. Additional specific requirements are contained in Part 1 of these Rules.
- 2 The latest edition of these Rules is to be referred to. These Rules may be downloaded from the ABS website at www.eagle.org, Rules and Guides, Downloads or may be ordered separately from the ABS Publications online catalog at www.eagle.org, Rules and Guides, Catalog.

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 (2017)

TABLE 3
Summary of Changes from the 2016 Rules

EFFECTIVE DATE 1 July 2016 – shown as (1 July 2016)
(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	
3-2-11/1.1	Application	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)
3-2-11/Table 1B	Coefficient k_c for High-Lift/ Performance Rudders	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)
3-2-11/7.4	Rudder Trunk and Rudder Stock Sealing	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)
3-2-11/Figure 2 (New)	Fillet Shoulder Radius	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)
3-2-11/9.3.3 (New)	Joint between Rudder Stock and Coupling Flange	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)
3-2-11/Figure 3 (New)	Welded Joint Between Rudder Stock and Coupling Flange	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)
3-2-11/9.5.1	Coupling Bolts	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)
3-2-11/9.5.3 (New)	Joint between Rudder Stock and Coupling Flange	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)

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<i>Part/Para. No.</i>	<i>Title/Subject</i>	<i>Status/Remarks</i>
3-2-11/11.1	Coupling Taper	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)
3-2-11/11.3	Keyed Fitting	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)
3-2-11/11.5	Keyless Fitting	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)
3-2-11/13.1	General	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)
3-2-11/13.3	Diameter	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)
3-2-11/13.4	Push-up Pressure and Push-up Length	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)
3-2-11/15.1.5 (New)	Liners and Bushes	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)
3-2-11/15.3	Rudder Carrier	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)
3-2-11/Table 6	Allowable Bearing Surface Pressure	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)
3-2-11/17.3	Side, Top and Bottom Plating	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)
3-2-11/17.5	Diaphragm Plates	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)
3-2-11/17.7 (New)	Connections of Rudder Blade Structure with Solid Parts	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)
3-2-11/Figure 6 (New)	Cross-section of the Connection Between Rudder Blade Structure and Rudder Stock Housing	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)
3-2-11/Table 7 (New)	Thickness of Side Plating and Vertical Diaphragm Plates	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)
3-2-11/17.9 (New)	Welding and Design Details	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)
3-2-11/17.11	Watertightness	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)
3-2-A2/9 (New)	Rudders Supported by a Horn Arranged with Two Pintles (Supports)	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)

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<i>Part/Para. No.</i>	<i>Title/Subject</i>	<i>Status/Remarks</i>
3-2-A2/Figure 4 (New)	Rudder Supported by a Horn Arranged with Two Pintles (Supports)	To align the requirements with the updated IACS UR S10, which includes the improvements introduced by IACS in the <i>Common Structural Rules for Bulk Carriers</i> . (Incorporates Notice No. 1)
3-2-12/19	Container Loading	To align the requirements with the updated IACS UR S21A, which says "Container foundations are to be designed to the satisfaction of the individual class society. (Incorporates Notice No. 1)
3-2-14/11.3.1	Coaming Construction	To align the requirements with the ABS <i>OSV Rules</i> . (Incorporates Notice No. 1)
3-3-1/5.3	ABS Review	To address the casualty of ABS tug during sea trials. (Incorporates Notice No. 1)
PART 4	Vessel Systems and Machinery	
4-6-2/11.1	Power Supply Feeders	To align the requirements with IACS UI SC242. (Incorporates Notice No. 1)
4-6-3/3.7.5	Maintenance Schedule of Batteries	To align the requirements with the updated IACS UR E18, which clearly defines the stages for submitting the Maintenance Schedule of batteries. (Incorporates Notice No. 1)
4-6-3/3.31	High Fire Risk Areas	To align the requirements with IACS UR E15, which specifies that spaces having little or no fire risk as defined by SOLAS and MSC/Circ.1120 (i.e., spaces containing generators and major electrical units; refrigerating, stabilizing, ventilation and air conditioning machinery; and trunk to such spaces, provided they are not handling or using flammable liquids) are not considered to be high fire risk areas. (Incorporates Notice No. 1)
4-6-5/1.1.3(d)	Creepage Distances	To align the requirements with the updated IACS UR E11, which aligns with IEC 60502-1 (2009) and IEC 60502-2 (2005) with respect to testing. (Incorporates Notice No. 1)
4-6-5/1.1.3(e) (Renumbered)	Creepage Distances	To align the requirements with the updated IACS UR E11, which aligns with IEC 60502-1 (2009) and IEC 60502-2 (2005) with respect to testing. (Incorporates Notice No. 1)
4-6-5/1.1.3(f) (Deleted)	Non-standardized Parts	To align the requirements with the updated IACS UR E11, which aligns with IEC 60502-1 (2009) and IEC 60502-2 (2005) with respect to testing. (Incorporates Notice No. 1)
4-6-5/1.9.2(b)	Warning Plate	To align the requirements with the updated IACS UR E11, which aligns with IEC 60502-1 (2009) and IEC 60502-2 (2005) with respect to testing. (Incorporates Notice No. 1)
4-6-5/1.9.3(h)	Cable Test after Installation	To align the requirements with the updated IACS UR E11, which aligns with IEC 60502-1 (2009) and IEC 60502-2 (2005) with respect to testing. (Incorporates Notice No. 1)
4-6-5/1.11.2(d)	Shutters	To align the requirements with the updated IACS UR E11, which aligns with IEC 60502-1 (2009) and IEC 60502-2 (2005) with respect to testing. (Incorporates Notice No. 1)
4-6-5/1.11.2(f)	Arc Flash and Associated Installation Requirements	To align the requirements with the updated IACS UR E11, which aligns with IEC 60502-1 (2009) and IEC 60502-2 (2005) with respect to testing. (Incorporates Notice No. 1)
4-6-5/1.11.3(a)	Application	To align the requirements with the updated IACS UR E11, which aligns with IEC 60502-1 (2009) and IEC 60502-2 (2005) with respect to testing. (Incorporates Notice No. 1)
4-6-5/1.13.4	Accessibility	To align the requirements with the updated IACS UR E11, which aligns with IEC 60502-1 (2009) and IEC 60502-2 (2005) with respect to testing. (Incorporates Notice No. 1)

EFFECTIVE DATE 1 January 2017 – shown as (2017)
(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	
3-1-2/1.7	Structures Exposed to Low Air Temperatures	To clarify material class requirements for plating attached to hull envelope plating exposed to low air temperature and to address the relationship between the design temperatures, in line with IACS UR S6.
3-1-2/Table 1	Material Grades	To clarify that even if A36 is used it should be produced by a steel mill approved by ABS.
3-1-2/Table 2	Material Class of Structural Members	To clarify that even if A36 is used it should be produced by a steel mill approved by ABS.
3-1-2/Table 3	Application of Material Classes and Grades – Structures Exposed at Low Temperatures	To clarify material class requirements for plating attached to hull envelope plating exposed to low air temperature and to address the relationship between the design temperatures, in line with IACS UR S6.
3-1-2/1.9	Design Temperature	To clarify material class requirements for plating attached to hull envelope plating exposed to low air temperature and to address the relationship between the design temperatures, in line with IACS UR S6.
3-1-2/Figure 2	Commonly Used Definitions of Temperatures	To clarify material class requirements for plating attached to hull envelope plating exposed to low air temperature and to address the relationship between the design temperatures, in line with IACS UR S6.
3-2-A1/7.1	Required Information	To specify that forward draft information is to be reviewed in the loading manual.
3-2-4/1.3	Center Girder	To remove requirements for intact girders in fresh water and fuel oil tanks, since free surface effects are considered by the stability requirements of Section 3-3-1.
3-2-7/5.7.3	End Connections	To provide an option of direct strength analysis.
3-2-8/5.1	Plating	To address the calculation of the design head for tanks where rupture disks or pressure/vacuum valves are fitted.
3-2-9/5.1	Doors for Closing Appliances Access Openings	To clarify the requirements for weathertight doors located on exposed bulkheads of superstructures and deckhouses.
3-2-9/9	Deckhouses	To clarify the requirements for weathertight doors located on exposed bulkheads of superstructures and deckhouses.
3-2-10/21	Propulsion Improvement Devices (PID) as Hull Appendages	To eliminate confusion from the use of “ESD”, which is used elsewhere in the Rules and Guides for “Emergency Shutdown”.
3-2-10/21.7 (New)	Structural End Connection	To address the risk of cracks developing at the welded end connection of the device to the hull.
3-2-11/23.1	Application Scope	To clarify that some of the prescriptive formulas in the following sections are related to vessel’s maximum speed; as such they may not applicable for the azimuthal thrusters are exclusively used for DP.
3-2-11/23.3	Plans and Documents	To specify only structural components related plans and documents.
3-2-11/23.7	Design Force	To add illustrations of nozzle supporting struts.
3-2-11/Figure 8	An Illustration of Azimuthal Thruster	To add illustrations of nozzle supporting struts.
3-2-11/23.19 (New)	Thruster Nozzle Top Connections	To address potential cracks and vibration in the nozzle connection structure.
3-2-11/23.21 (New)	Nozzle Strut	To add a requirement with a simplified approach for verification of the nozzle strut.
3-2-11/23.23 (New)	Direct Analysis	To clearly define the data, the plans, and the acceptance criteria for azimuth thruster direct analysis.
3-2-11/23.25	Welding and NDT Testing	To add requirements for the component connections in the azimuthal thruster.
3-2-A2/3.3.2	Bending Moment at Neck Bearing	To specify that in any case that the rudder is not fully submerged in seagoing conditions, rudder stock should also have sufficient strength for such case.

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<i>Part/Para. No.</i>	<i>Title/Subject</i>	<i>Status/Remarks</i>
3-2-14/1.1	Height	To align the requirements with IACS UI LL14 which says “A guard rail should also be required for first tier deckhouses and for superstructures' ends”.
3-2-14/1.5.2	<No Title>	To align the requirements with IACS UI LL47 (g) Fig. 1 and ABS practice.
3-3-A2/Table 1	Acceptable Tolerances	To clearly indicate the meaning “slash /” in accordance with ABS internal process instructions.
3-6-1/1.7 (New)	Articulated Tug-Barge Units	To provide visibility requirements for articulated tug barge units.
3-6-1/Figure 5	<No Title>	To align with the wording “Main Steering Position” as indicated in 3-6-1/1.1.3.
PART 4	Vessel Systems and Machinery	
4-2-1/3.3	Booster Pumps	To emphasize that standby pumps are required for single engine installations, to clarify the required capacity of the specified standby pump, and to avoid the possibility of having a single engine installation with spare pump carried in lieu of a fitted standby pump.
4-2-1/9.3	Low Oil Pressure Alarms, Temperature and Level Indicators	To specify that main and auxiliary combustion engines, above 37 kW, must be fitted with an alarm device with audible and luminous signals for failure of the lubricating oil system, in line with IACS UR M2.
4-3-3/15.3.1	<No Title>	To allow rudder torque and load to be measured in the ballast condition, and to be reliably extrapolated to the full load condition where the vessel cannot be tested in this condition, in line with SOLAS Reg. II-1/29.3 and 29.4.
4-4-1/9.19.3(b)	Hose End Fittings	To remove the relaxation where flooding can be prevented by the installation of a readily accessible shutoff valve immediately upstream of the hose, and to clarify the requirement for clamps.
4-4-3/9.9.3(b)ix)	<No Title>	To provide requirements for side covers, in line with IACS UR P3 Rev 4.
4-5-2/11.1.2	Design	To align the requirements with FSS Code Chapter 5, adopted by Resolution MSC.206(81) and amended by Resolution MSC.339(91).
4-5-2/11.1.3	Alarm	To align the requirements with FSS Code Chapter 5, adopted by Resolution MSC.206(81) and amended by Resolution MSC.339(91).
4-5-2/11.9.4(c)	Controls	To align the requirements with FSS Code Chapter 5, adopted by Resolution MSC.206(81) and amended by Resolution MSC.339(91).
4-5-2/15	Fireman’s Outfit	To align the requirements with SOLAS II-2/Reg.10.4.
4-6-2/13.3	Navigation Light System	To remove inconsistencies and align the requirements with the <i>Steel Vessel Rules</i> .
4-6-2/17.1.2(b)	<No Title>	To align the requirements with IACS UI SC35 and MSC.311(88).
4-6-2/17.1.2(c)	<No Title>	To clarify that the power supply failure alarms of general emergency alarm system are to be provided in a normally manned control station.
4-6-4/3.21.2(c)	Variation from Rated Voltage – Transient Conditions	To clarify that voltage regulation during transient conditions need not be tested during factory testing provided that calculated values based on earlier type test records are available, in line with IACS UR E13.
4-6-4/3.21.2(d)	Short Circuit Conditions	To account for both the stationary short circuit current delivered by the generator, as well as the transient behavior of this short circuit current, in line with IACS UR E13.
4-6-4/10.5.8	Cooling Arrangements	To specify the circumstances in which the cooling liquid needs to be non-conducting and non-flammable, in line with IEC 61800-5-1.
4-6-4/10.7.2	Insulation Test (AC or DC Voltage Test)	To specify that the duration of the insulation test is 5 sec and 1 sec for the Type Test and the Routine Test, respectively, in line with IEC 61800-5-1.
4-7-1/5.33	Programmable Electronic System (PES)	To define a system based on one or more programmable electronic devices as a Programmable Electronic System, in line with ISO 17894:2005/4.8.

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<i>Part/Para. No.</i>	<i>Title/Subject</i>	<i>Status/Remarks</i>
4-7-1/5.43 (New)	Data Communication Link	To define “data communication link”, in line with IACS UR E22/2.3.
PART 5	Specialized Vessels and Services	
5-11-4/7 (New)	Articulated Tug and Barge Connection	To provide requirements for design and review of structure in way of connection.