

RULES FOR BUILDING AND CLASSING

STEEL VESSELS 2006

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Page No.	Paragraph	Comments
Part 2 Appendix 1	Rules for Materials and Welding List of Destructive and Nondestructive Tests Required in Part 2, Chapters 1, 2 and 3, and Responsibility for Verifying	
264	2-A1	Under “2-3-10 Ductile (Nodular) Iron Castings”, references “2-3-10/1.3” and “2-3-10/1.7” to read “2-3-10/11” and “2-3-10/7”, respectively.
264	2-A1	Under “2-3-11 Gray-iron Castings”, reference “2-3-11/3” to read “2-3-11/13”.
Part 3 Chapter 2 Appendix 4	Hull Construction and Equipment Hull Structures and Arrangements Buckling Strength of Longitudinal Strength Members	
62	3-2-A4/3.3.2	Definition of calculated compressive stress to read “ $\sigma_a = \dots$ ”
Part 3 Chapter 2 Section 11	Hull Construction and Equipment Hull Structures and Arrangements Superstructures and Deckhouses	
145	3-2-11/11.7	Revise to read: “11.7 Material (1999) In general, the construction of helicopter decks is to be of steel or other material with equivalent ability to retain structural capacity in a fire. If the helicopter deck forms the deckhead of a deckhouse or superstructure, it is to be insulated to A-60 class standard. Aluminum alloys may be used for helicopter decks above deckhouses, provided the following conditions are complied with: i) There are to be no openings in the exterior bulkheads directly below the helicopter deck ii) All windows in the lower exterior bulkheads are to be fitted with steel shutters.”
Part 3 Chapter 2 Section 15	Hull Construction and Equipment Hull Structures and Arrangements Protection of Deck Openings	
179	3-2-15/3.3.1	After second equation, add new equation as follows: “For a position 1 hatchway located at least one superstructure standard height higher than the freeboard deck: $p = 3.5 - 1.5x \frac{(100 - L_{f1})}{76} \quad \text{kN/m}^2 \text{ (tf/m}^2, \text{ Ltf/ft}^2\text{)”}$

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Part Chapter Section	3 2 15	Hull Construction and Equipment Hull Structures and Arrangements Protection of Deck Openings
180	3-2-15/3.3.1	After definition of L_f , add definition of L_{f1} as follows: “ L_{f1} = freeboard length, in m (ft), as defined in 3-1-1/3.3, but is not to be taken as greater than 150 m (325 ft) and less than 90 m (295 ft)”
Part Chapter Section	4 1 1	Vessel Systems and Machinery General Classification of Machinery
13	4-1-1/Table 3	In row 4, PQA column to read “NA”.
Part Chapter Section	4 2 1	Vessel Systems and Machinery Prime Movers Diesel Engines
59	4-2-1/15.7	Revise first sentence to read “Engines driving essential auxiliaries or generators, other than propulsion generators are to be subjected to an operational test for at least 4 hours.”.
Part Chapter Section	4 3 1	Vessel Systems and Machinery Propulsion and Maneuvering Machinery Appendix 1 – Rating of Cylindrical and Bevel Gears
132	4-3-1A1/3	After row for α_t add definition “ α_{vt} transverse pressure angle of virtual cylindrical gear degrees”.
132	4-3-1A1/3	After row for β_b add definition “ β_{vb} helix angle at base circle degrees”.
132	4-3-1A1/3	Symbol “ α_{tw} ” to read “ α_{wt} ”.
133	4-3-1A1/5	In eighth equation, “inv α_{tw} ” to read “inv α_{wt} ”.
135	4-3-1A1/7	After definition for tan β_{bm} add definition “ $\beta_{vb} = \arcsin(\sin \beta_m \cdot \cos \alpha_n)$ ”.
135	4-3-1A1/7	Under geometrical definitions, in equation for R_m , “R” to read “ R_e ”.
135	4-3-1A1/7	Under outer transverse module, first term in equation for m_{et} to read “ $\frac{d_{e2}}{z_2}$ ”.
135	4-3-1A1/7	Delete “Normal module at mid-facewidth:”.
136	4-3-1A1/7	Under transverse pressure angle of virtual cylindrical gear, “ α_{tw} ” to read “ α_{vt} ” (2 places).
137	4-3-1A1/7	In sixth line, “outer addendum” to read “outer dedendum”.
137	4-3-1A1/7	Symbol for “transverse contact ratio” to read “ $\varepsilon_{v\alpha}$ ”.
137	4-3-1A1/7	Under length of the middle line of contact, “ ℓ_{vb} ” to read “ ℓ_{bm} ”.
141	4-3-1A1/15.3.1	Equation for d_{m1} , d_{m2} to read “ $\frac{d_{a1,a2} + d_{f1,f2}}{2}$ ”.
147	4-3-1A1/15.3.5	Under Cylindrical Gears, “ $K_{v(N=1.15)}$ ” to read “ $K_{v(N=1.5)}$ ”.

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Part Chapter Section	4 3 1	Vessel Systems and Machinery Propulsion and Maneuvering Machinery Appendix 1 – Rating of Cylindrical and Bevel Gears
154	4-3-1A1/19.1	Second equation for $K_{H\alpha}$ to read: $"K_{H\alpha} = K_{F\alpha} = \frac{\varepsilon_{\gamma}}{2} \cdot \left[0.9 + 0.4 \cdot \frac{C_{\gamma} \cdot (f_{pbe} - y_a) \cdot b}{F_{tH}} \right] \text{ for } \varepsilon_{\gamma} \leq 2"$
158	4-3-1A1/21.7	In equation for Z_H for cylindrical gears, " α_{tw} " to read " α_{wt} " (2 places).
170	4-3-1A1/23.5.3	Equation " $\gamma_a = \left(\frac{0.5 \cdot \pi + 2 \cdot x_{hm} \cdot \tan \alpha_n}{z_{vn}} + inv\alpha_n - inv\alpha_{an} \right) \cdot \frac{180}{\pi}$ " to read $" \gamma_a = \left(\frac{0.5 \cdot \pi + 2 \cdot (x_{hm} \cdot \tan \alpha_n + x_{sm})}{z_{vn}} + inv\alpha_n - inv\alpha_{an} \right) "$
188	4-3-1A1/Figure 4	Dimensions " R " and " h_{a2} " to read " R_{e2} " and " h_{ae2} ", respectively.
Part Chapter Section	4 3 3	Vessel Systems and Machinery Propulsion and Maneuvering Machinery Propellers
228	4-3-3/5.13.2	In equation for s , " t " to read " T ".
228	4-3-3/5.13.2	Revise last sentence to read "See 4-3-3/5.1 for f and 4-3-3/5.3 for W and T ".
Part Chapter Section	4 4 1	Vessel Systems and Machinery Boilers, Pressure Vessels and Fired Equipment Boilers and Pressure Vessels and Fired Equipment
296	4-4-1/9.3.3	In last line, reference "4-6-2/5.13" to read "4-6-2/5.15".
Part Chapter Section	4 6 1	Vessel Systems and Machinery Piping Systems General Provisions
362	4-6-1/Table 2	In Note 4, reference "4-6-2/5.13" to read "4-6-2/5.15".
362	4-6-1/Table 2	In Note 5, reference "4-6-2/5.7.4" to read "4-6-2/5.9".
362	4-6-1/Table 2	Add new Note label "(5)" in the "Design approval" column for Pipe fittings Class I, II.
362	4-6-1/Table 2	Revise Note 5 to read "Design of flexible hoses and mechanical pipe joints is to be approved in each case. See 4-6-2/5.7 and 4-6-2/5.9, respectively."
Part Chapter Section	4 6 2	Vessel Systems and Machinery Piping Systems Metallic Piping
382	4-6-2/ 5.9.2(e)v)2b	In last paragraph, reference "4-6-2/5.9(e)iv)" to read "4-6-2/5.9.2(e)iv)".
385	4-6-2/5.11.1	In last line, reference "4-6-2/5.13" to read "4-6-2/5.15".
386	4-6-2/5.17	In second line, reference "4-6-2/5.13" to read "4-6-2/5.15".
388	4-6-2/9.6	In first line, reference "4-6-2/5.5.6" to read "4-6-2/5.9".
388	4-6-2/9.7.3i)	In second bullet, reference "4-6-2/5.9.3(a)" to read "4-6-2/5.11.3(a)".
390	4-6-2/9.13.2iii)	In last line, reference "4-6-2/5.9.3(a)" to read "4-6-2/5.11.3(a)".
397	4-6-2/Table 7	In Row E, reference "4-6-2/5.13" to read "4-6-2/5.15".

Page No.	Paragraph	Comments
Part 4 Chapter 6 Section 4	Vessel Systems and Machinery Piping Systems Ship Piping Systems and Tanks	
443	4-6-4/Table 2	Add new Note 1 to read “This arrangement applies, provided the propulsion and essential systems support rapid fuel changeover and are capable of operating in all normal operating conditions at sea with both types of fuels (MDO and HFO).”. Add Note label “ ⁽¹⁾ ” in first column of “Dual-fuel vessels (HFO + MDO)” row.
446	4-6-4/13.7.1(b)	In third line, reference “4-6-2/5.13” to read “4-6-2/5.15”.
446	4-6-4/13.7.1(c)	Reference “4-6-2/5.7.1” to read “4-6-2/5.7”.
446	4-6-4/13.7.2	In second line of first paragraph, references “4-6-2/5.9” and “4-6-2/5.11” to read “4-6-2/5.11” and “4-6-2/5.13”, respectively.
446	4-6-4/13.7.2	In last line of second paragraph, reference “4-6-2/5.9.2” to read “4-6-2/5.11.2”.
449	4-6-4/15.1.5	In fifth line, “fuel oil piping systems” to read “lubricating oil piping systems”.
Part 4 Chapter 6 Section 5	Vessel Systems and Machinery Piping Systems Piping Systems for Internal Combustion Engines	
460	4-6-5/7.3.3	In second line, reference “4-6-2/5.13” to read “4-6-2/5.15” and in last line, reference “4-6-2/5.7.2” to read “4-6-2/5.8.1”.
465	4-6-5/9.7.1	In second line, reference “4-6-2/5.13” to read “4-6-2/5.15”.
Part 4 Chapter 6 Section 6	Vessel Systems and Machinery Piping Systems Piping Systems for Steam Plants	
470	4-6-6/3.3.1(b)	In second line, reference “4-6-2/5.13” to read “4-6-2/5.15”.
470	4-6-6/3.3.2	In second line, references “4-6-2/5.9” and “4-6-2/5.11” to read “4-6-2/5.11” and “4-6-2/5.13”, respectively.
477	4-6-6/5.11.3	In second line, reference “4-6-2/5.13” to read “4-6-2/5.15”.
484	4-6-6/11.7.3	Reference “4-6-2/5.7.2” to read “4-6-2/5.8”.
Part 4 Chapter 6 Section 7	Vessel Systems and Machinery Piping Systems Other Piping Systems	
486	4-6-7/Table 1	In row for hoses, reference “4-6-2/5.7.3(b)” to read “4-6-2/5.7.3(c)”.
486	4-6-7/Table 1	In row for molded expansion joint of composite construction, reference “4-6-2/5.7.2(b)” to read “4-6-2/5.8.1” (3 places).
487	4-6-7/3.5.3	In second line, references “4-6-2/5.9” and “4-6-2/5.11” to read “4-6-2/5.11” and “4-6-2/5.13”, respectively.
488	4-6-7/5.3.2	In second line, reference “4-6-2/5.13” to read “4-6-2/5.15”.
493	4-6-7/9.13.3	In last bullet, references “5-10-4/3.11.1” and “5-10-4/3.11.2” to read “5-10-4/3.9.1” and “5-10-4/3.9.2”, respectively.

Page No.	Paragraph	Comments
Part Chapter Section	4 8 1	Vessel Systems and Machinery Electrical Systems General Provisions
560	4-8-1/5.1.3	Revise last paragraph to read “Reference may be made to IEC Publication 61363-1 Electrical Installations of Ships and Mobile and Fixed Offshore Units – Part 1: Procedures for Calculating Short-Circuit Currents in Three-Phase A.C.”
Part Chapter Section	4 9 3	Vessel Systems and Machinery Remote Propulsion Control and Automation ACC Notation
698	4-9-3/15.5.1	In second line, reference “4-7-2/1.15” to read “4-7-2/1.13.1”.
Part Chapter Section	4 9 4	Vessel Systems and Machinery Remote Propulsion Control and Automation ACCU Notation
708	4-9-4/21.5.1	In second line, reference “4-7-2/1.15” to read “4-7-2/1.13.1”.
Part Chapter Appendix	5 1 1	Specific Vessel Types Vessels Intended to Carry Oil in Bulk (150 meters (492 feet) or more in Length) Guide for Fatigue Strength Assessment of Tankers
204	5-1-A1/1.9	In second paragraph, reference “5-1-A3/13” to read “5-1-A1/13”.
Part Chapter Section	5 8 1	Specific Vessel Types Vessels Intended to Carry Liquefied Gases in Bulk General
943	5-8-1/1.1.1	Add new second paragraph to read as follows: “For Liquefied Gas Carriers intended to carry liquefied natural gas, of which the methane content is more than 80%, the specific class notation of ✕ A1 Liquefied Natural Gas Carrier is to be assigned.”.
Part Chapter Section	5 8 6	Specific Vessel Types Vessels Intended to Carry Liquefied Gases in Bulk Materials of Construction
1035	5-8-6/1.3 (ABS)	In title, “5-8-5/1.3” to read “5-8-6/1.3”.
Part Chapter Section	7 3 2	Rules for Survey After Construction Hull Surveys Vessels for Unrestricted Service
58	7-3-2/3.17.1	Title to read “Piping Systems on Weather Decks”.
60	7-3-2/3.18.1	Title to read “Piping Systems on Weather Decks”.
Part Appendix Section	7 4 4	Rules for Survey After Construction Guide for Hull Thickness Measurement
301	7-A-4/Table 1	In note 9, “column 2” to read “column 4”.
301	7-A-4/Table 1	In note 10, “column 1 and 2” to read “columns 1, 2 or 3”.