Amendments

Pt. 4 Hull Equipments

Present	Amendment	Note
〈Rules〉 - Pt 4	**〈Rules〉 - Pt 4**	
Ch.10 SHIPBOARD EQUIPMENT, FITTINGS AND SUPPORTING HULL STRUCTURES ASSOCIATED WITH TOWING AND MOORING	**Ch.10 SHIPBOARD EQUIPMENT, FITTINGS AND SUPPORTING HULL STRUCTURES ASSOCIATED WITH TOWING AND MOORING**	
Section 2 Towing and Mooring	**Section 2 Towing and Mooring**	
201. Towing	**201. Towing**	
1. , 2. 〈omit〉	**1. , 2. 〈same as present〉**	
3. Load considerations The minimum design load applied to supporting hull structures for shipboard fittings is to be: (1) For normal towing operations 〈omit〉 (2) For other towing service 〈omit〉 (3) For fittings intended to be used for, both, normal and other towing operations, the greater of the design loads according to (1) and (2). Notes: 1) Side projected area including that of deck cargoes as given by the ship nominal capacity condition is to be taken into account for selection of towing lines and the loads applied to shipboard fittings and supporting hull structure. 2) The increase of the line design break force for synthetic ropes according to Recommendation No. 10 needs not to be taken into account for the loads applied to shipboard fittings and supporting hull structure. 〈omit〉	**3. Load considerations** The minimum design load applied to supporting hull structures for shipboard fittings is to be: (1), (2) 〈same as present〉 (3) For fittings intended to be used for, both, normal and other towing operations, the greater of the design loads according to (1) and (2). Notes: 1) Side projected area including that of deck cargoes as given by the ship nominal capacity condition is to be taken into account for selection of towing lines and the loads applied to shipboard fittings and supporting hull structure. ~~2) The increase of the line design break force for synthetic ropes according to Recommendation No. 10 needs not to be taken into account for the loads applied to shipboard fittings and supporting hull structure.~~ 〈same as present〉	- IACS UR A2.1.3 - As 'increased design breaking strength of rope' was deleted in Rec.10(R.5) 2.3, note 2) was deleted as meaningless.
4. ~ 6. 〈omit〉 **202. ~ 206. 〈omit〉**	**4. ~ 6. 〈same as present〉** **202. ~ 206. 〈same as present〉**	

Present	Amendment	Note
202. Mooring 1., 2. 〈omit〉 3. Load considerations (1) ~ (3) 〈omit〉 (4) The design load is to be applied to fittings in all directions that may occur by taking into account the arrangement shown on the towing and mooring arrangements plan. Where the mooring line takes a turn at a fitting the total design load applied to the fitting is equal to the resultant of the design loads acting on the line, refer to the **Fig 4.10.1** in **201. 3**. However, in no case does the design load applied to the fitting need to be greater than twice the design load on the line. Notes: 1) If not otherwise specified by Recommendation No. 10, side projected area including that of deck cargoes as given by the ship nominal capacity condition is to be taken into account for selection of mooring lines and the loads applied to shipboard fittings and supporting hull structure. 2) The increase of the line design break force for synthetic ropes according to Recommendation No. 10 needs not to be taken into account for the loads applied to shipboard fittings and supporting hull structures. 4. ~ 6. 〈omit〉 203. ~ 206. 〈omit〉	202. Mooring 1. ~ 2. 〈same as present〉 3. Load considerations (1) ~ (3) 〈same as present〉 (4) The design load is to be applied to fittings in all directions that may occur by taking into account the arrangement shown on the towing and mooring arrangements plan. Where the mooring line takes a turn at a fitting the total design load applied to the fitting is equal to the resultant of the design loads acting on the line, refer to the **Fig 4.10.1** in **201. 3**. However, in no case does the design load applied to the fitting need to be greater than twice the design load on the line. Notes: 1) If not otherwise specified by Recommendation No. 10, side projected area including that of deck cargoes as given by the ship nominal capacity condition is to be taken into account for selection of mooring lines and the loads applied to shipboard fittings and supporting hull structure. ~~2) The increase of the line design break force for synthetic ropes according to Recommendation No. 10 needs not to be taken into account for the loads applied to shipboard fittings and supporting hull structures.~~ 4. ~ 6. 〈same as present〉 203. ~ 206. 〈same as present〉	- IACS UR A2.2.3 - As 'increased design breaking strength of rope' was deleted in Rec.10(R.5) 2.3, note 2) was deleted as meaningless.

Present	Amendment	Note
〈Rules〉 - Pt 4 Hull Equipments **Ch.10 SHIPBOARD EQUIPMENT, FITTINGS AND SUPPORTING HULL ~** **Sec. 2 Towing and Mooring** **201. ~ 202. 〈omit〉** **203. Towing and mooring arrangements plan** **1.** 〈omit〉 **2.** Information provided on the plan is to include in respect of each shipboard fitting. *(2024)* (1) ~ (3) 〈omit〉 (4) For ships of less than 3,000 gross tonnage engaged in international voyages and contracted for construction on or after 1 January 2024, the following shall be additionally included on the plan and provided on board; (A) Maximum brake holding load; (B) Technical specification document ~ (C) Properties of mooring lines related to LDBF and ~ (5) For ships of 3,000 gross tonnage and above engaged in international voyages and contracted for construction on or after 1 January 2024, the following shall be included in addition to those specific under Par. (4) and provided on board; (A) A document shall be provided by the designer for information and as a supplement to the towing and mooring ~ (B) Deviations shall be recorded, if any, (Par. 6.1 of MSC.1 Circ./1619), justification and suitable safety measures shall be provided ~ (C) If deviations are not found necessary, and the supplement is not needed, ~ (D) The mooring maximum brake holding load shall be less than 100% of the Ship Design Minimum Breaking Load (MBL_{SD}) **3.** 〈omit〉 **204. ~ 206. 〈omit〉**	**〈Rules〉 - Pt 4 Hull Equipments** **Ch.10 SHIPBOARD EQUIPMENT, FITTINGS AND SUPPORTING HULL ~** **Sec. 2 Towing and Mooring** **201. ~ 202. 〈same as Prsent〉** **203. Towing and mooring arrangements plan** **1.** 〈same as Present〉 **2.** Information provided on the plan is to include in respect of each shipboard fitting. *(2024)* (1) ~ (3) 〈same as Present〉 (4) For ships subject to SOLAS and with a gross tonnage of less than 3,000 tons and contracted for construction on or after 1 January 2024, the following shall be additionally included on the plan and provided on board; 〈same as Present〉 (5) For ships subject to SOLAS and with a gross tonnage of 3,000 tons or more and contracted for construction on or after 1 January 2024, the following shall be included in addition to those specific under Par. (4) and provided on board; 〈same as Present〉 **3.** 〈same as Present〉 **204. ~ 206. 〈same as Present〉**	-MSC.1/Circ.1362 3., 4 : SOLAS interpretation : Fishing vessels, Barges are not subject to the SOLAS convention. - To avoid confusion in the application of the regulations, it is clarified that SOLAS ships are the target.

Present (Reference)	-	-

〈Rule〉 - Pt 4

CH 4 BULWARKS, FREEING PORTS, SIDE SCUTTLES, RECTANGULAR WINDOWS, SKYLIGHTS VENTILATORS AND PERMANENT GANGWAYS

Section 3 Side Scuttles, Rectangular Windows and Skylights

301. General 【See Guidance】

1. The requirements in this chapter apply to side scuttles and rectangular windows on the side shell, superstructure and deckhouse up to the third tier above the freeboard deck. The requirements for the side shell, superstructure and deckhouse above the third tier are to be as deemed appropriate by the Society.

2. 〈omit〉

302. ~ 302 〈omit〉

305. Design pressure and maximum allowable pressure of side scuttles.

1. The design pressure of side scuttle is to be less than the maximum allowable pressure determined to their nominal diameters and classes. The design pressure P is to be determined using the following equation. 【See Guidance】

$$P = 10ac(bf - y) \quad (kPa)$$

a, b, c and f : As specified **Pt 3, Ch 17, 201.** of the Rules.

y : Vertical distance from summer load line to sill of side scuttle(m). Where timber load line is given, vertical distance from timber load line to sill of side scuttle.

2. 〈omit〉

306. ~ 309 〈omit〉

Present	Amendment	Note
〈Guidance〉 - Pt 4 **CH 4 BULWARKS, FREEING PORTS, SIDE SCUTTLES, RECTANGULAR WINDOWS, SKYLIGHTS VENTILATORS AND PERMANENT GANGWAYS** **Sec.1 ~ Sec.2 〈omit〉** **Section 3 Side Scuttles, Rectangular Windows and Skylights** **301. General Application 【See Rule】** **1.** With respect to the provisions of **Ch 4, 301.** of the Rules, the term as deemed as appropriate by the Society means that the side scuttles and rectangular windows is to be in conformity corresponding to the position and to have appropriate weathertightness. **2.** With respect to the provisions of **Ch 4, 301.** and **302.** of the Rules, windows on a navigation bridge within the third tiers above the freeboard deck, which is granted to be of rectangular window in accordance with the provisions of **306.** of the rules, may be of rectangular window other than of class E or F subject to the following (1) and (2) (1) ~ (2) 〈omit〉 **301. 〈Omit〉** **Sec.4 ~ Sec.5 〈omit〉**	**〈Guidance〉 - Pt 4** **CH 4 BULWARKS, FREEING PORTS, SIDE SCUTTLES, RECTANGULAR WINDOWS, SKYLIGHTS VENTILATORS AND PERMANENT GANGWAYS** **Sec.1 ~ Sec.2 〈same as present〉** **Section 3 Side Scuttles, Rectangular Windows and Skylights** **301. General Application 【See Rule】** **1.** With respect to the provisions of **Ch 4, 301.** of the Rules, the term as deemed as appropriate by the Society means that the side scuttles and rectangular windows is to be in conformity corresponding to the position and to have appropriate weathertightness. In the case of a deckhouse with a high height from the freeboard deck, such as a RO-RO ship, a deckhouse with a vertical height from the freeboard deck to the bottom of the deckhouse that is more than four standard height of superstructure is considered a fourth itiers deckhouse. *(2026)* **2.** 〈same as present〉 **301. 〈same as present〉** **Sec.4 ~ Sec.5 〈same as present〉**	-There is no design pressure requirement for windows above 4th floor. For RORO passenger ships, even if the actual deckhouse height is high, if it is below 3rd floor, glass of a certain thickness or more must be used. -Refer to the concept of Position I, II of Load Line and the concept of external pressure in Pt13 Ch4 Sec 5.

Present	Amendment	Note
〈Guidance〉 - Pt 4 **Ch.4 BULWARKS, FREEING PORTS, ~ AND PERMANENT GANGWAYS** **Sec.1 ~ Sec.4 〈omit〉** **Section 5 Permanent Gangways** 501. General 【See Rule】 **1.** Protection of crew provided in exposed freeboard deck, superstructure deck, crew accommodation area and machinery space and other area locations in question is to be in accordance with **Table 4.4.3.** **2. ~ 4. 〈omit〉** **Table 4.4.3 Protection of crew (continue)** (NOTES) 1. 〈omit〉 2. Protection methods are to be as following (a) to (f) (a) 〈omit〉 (b) A permanent and efficiently constructed gangway fitted at or above the level of the superstructure deck on or as near as practicable to the center line of the ship, providing a continuous platform at least 0.6 m in width and a non-slip surface, with guard rails extending on each side throughout its length. Guard rails shall be at least 1 m high with courses as required in Load Line Regulation 25(3), and supported by stanchions spaced not more than 1.5 m ; a foot-stop shall be provided. (c) ~ (f) 〈omit〉 3. 〈omit〉 (Notes) (1) For example, the Standard Specification for Fibre Reinforced Polymer (FRP) Gratings Used in Marine Construction and Shipbuilding (ASTM F3059-14).	**〈Guidance〉 - Pt 4** **Ch.4 BULWARKS, FREEING PORTS, ~ AND PERMANENT GANGWAYS** **Sec.1 ~ Sec.4 〈same as present〉** **Section 5 Permanent Gangways** 501. General 【See Rule】 **1.** Protection of crew provided in exposed freeboard deck, superstructure deck, crew accommodation area and machinery space and other area locations in question is to be in accordance with **Table 4.4.3.** **2. ~ 4. 〈same as present〉** **Table 4.4.3 Protection of crew (continue)** (NOTES) 1. 〈same as present〉 2. Protection methods are to be as following (a) to (f) (a) 〈same as present〉 (b) A permanent and efficiently constructed gangway fitted at or above the level of the superstructure deck on or as near as practicable to the center line of the ship, providing a continuous platform at least 0.6 m in width and a non-slip surface, with guard rails extending on each side throughout its length. Guard rails shall be at least 1 m high with three courses as required in **Load Line Regulation 25(3)**, and supported by stanchions spaced not more than 1.5 m ; a foot-stop shall be provided. (c) ~ (f) 〈same as present〉 3. 〈same as present〉 (Notes) (1) For example, the Standard Specification for Fibre Reinforced Polymer (FRP) Gratings Used in Marine Construction and Shipbuilding (ASTM F3059-14).	-ICLL Annex I Reg 25-1 (2)(b)

Present	Amendment	Note
〈Guidance〉 - Pt 4 **Ch.8 Equipment No. and Equipment** **Sec.1 General 〈omit〉** **Section 2 Equipment Number** 201. Equipment number 【See Rule】 1. Equipment for tugs 〈omit〉 2. Significant figures 〈omit〉 3. Δ, a 〈omit〉 4. Measurement of breadth of superstructures 〈omit〉 5. A(side project area) 〈omit〉 6. Mooring lines for ships with EN 〉 2000 〈omit〉 7. Tow line 〈omit〉 203. 〈omit〉 **Sec. 3 ~ Sec. 9 〈omit〉**	**〈Guidance〉 - Pt 4** **Ch.8 Equipment No. and Equipment** **Sec.1 General 〈same as present〉** **Section 2 Equipment Number** 201. Equipment number 【See Rule】 1. ~ 7. Tow line 〈same as present〉 8. When the Equipment number changes due to modification, Annex 4-5 can be referenced as an alternative method for changing Equipment. *(2026)* 203. 〈present〉 **Sec. 3 ~ Sec. 9 〈same as present〉**	〈newly added〉

Present	Amendment	Note
〈newly added〉	**Annex 4-5 Alternative measures for changing the Equipment when the Equipment letter upgrades due to modification *(2026)***	〈newly added〉
	1. After vessel modification/alteration, the anchoring equipment should have the required holding power and safety levels according to the new equipment letter.	
	(1) Chain diameter: a reduction of up to 12% due to wear and corrosion is permitted according to the new equipment letter.	- Ch8 407.3
	(2) Chain length: no reduction is permitted.	
	(3) Anchor weight: a reduction of up to 25% is permitted. The deficiency should be compensated with additional lengths of chain of same weight as the anchor weight deficiency 50%. Minimum compensation will always be one additional length. (In the calculated number of additional chain length, if the decimal point is less than +0.1, it is rounded down, and if it is greater than that, it is rounded up.)	- One length of chains: 27.5m
	2. Equipment deficiency, compensated for by additional lengths of chain, should be according to the new equipment letter at times of possible renewal after the conversion/alteration.	
	3. Wear and tear limits should be calculated based on the new equipment letter. A reference to this will be noted as a Survey Report-Informative Notes.	
	4. Important consequences	
	(1) Chain lockers may require modification to accommodate new chain.	
	(2) Anchor pockets may require modification. Note that changing to High Holding Power Anchors allows for 25% reduction in anchor weight.	- Ch8 202.
	(3) Cable lifters may need to be replaced to match the new chain diameter. Note that using a high material grade for the chain can mitigate the extent of the required upgrades.	
	(4) Winlass hoisting speed of windlass should maintain at least 0.15m/s after the equipment upgrade.	- Pt5 Ch8 204.3 (5)
	(5) Upgrading of windlass, chain stoppers and etc. should be evaluated to unsure they withstand the increased breaking strength of the new chain.	
	(6) The continuous duty pull of the windlass may be increased.	

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〈Example〉
No 1.
Existing equipment letter: B5 - anchors 2×900 kg + chain 357.5 m 30 mm Grade 1.
New required equipment letter: C2 - anchors 2×1140 kg + chain 385.0 m 34 mm Grade 1.
New wear limit: 34 mm x (1 - 0.12) = 29.9 mm.
Equipment deficiency is calculated as follows:
<table>
<tr><th>Chain length</th><th>Weight of anchors</th></tr>
<tr><td>385 m - 357.5 m = 27.5 m</td><td>(2 × 900 kg -2 × 1140 kg) × 1.5 = 720 kg
Weight compensation:
720 kg : 25.32 kg/m = 28.4 m</td></tr>
<tr><td colspan="2">→ New: 27.5 m + 28.4 m = 2 additional lengths of 27.5 m, 34 mm Grade 1 chain; one length on each side.
Existing anchors remain.</td></tr>
</table>
Survey Report-Informative Notes should be issued e.g.:
"Due to the ship's modifications, the equipment letter has been changed from B5 to C2. To compensate the shortage in anchor weight and chain length, one length of chain has been added on each side of the ship. Wear and tear limits are calculated based on the new equipment letter."
</td>
<td>
〈newly added〉

- Ch8 Table 4.8.1.
Anchor B5: 900 kg,
C2: 1140 kg

- Ch8 Table 4.8.8 Chain 1m mass:
25.32kg/m

- 28.4 - 27.5 = 0.9m
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No 2.
Existing equipment letter: F2-2 × 4050 kg anchors + 522.5 m 56 mm Grade 2 chain.
New required equipment letter: F5-2 × 4890 kg anchors + 550 m 62 mm Grade 2 chain.
New wear limit: 62 mm - 12% = 54.6 mm. However, if the chain needs to be replaced to increase the corrosion margin, a Grade 3 chain is used, as the chain cable lifter cannot use a 62 mm chain.
Equipment deficiency is calculated as follows:
<table>
<tr><th>Chain length</th><th>Weight of anchors</th></tr>
<tr><td>550 m, 54 mm, Grade 3</td><td>Weight deficiency:
(4890 kg - 4050 kg) × 2 × 1.5 = 2520 kg
Weight compensation:
2520 kg/63.86 kg/m = 39.5 m</td></tr>
<tr><td colspan="2">→ Required: 550 m + 39.5 m = 589.5 m, 22 lengths of 54 mm Grade 3 chain; 11 lengths on each side.
Existing anchors remain</td></tr>
</table>

Survey Report-Informative Notes should be issued similar as in example No 1.
</td>
<td>〈newly added〉</td>
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