

TÜRK LOYDU



PERMISSIBLE REDUCTION OF THICKNESS

JANUARY 2022

This latest edition incorporates all rule changes. The latest revisions are shown with a vertical line. The section title is framed if the section is revised completely. Changes after the publication of the rule are written in red colour.

Unless otherwise specified, these Rules apply to ships for which the date of contract for construction as defined in TL- PR 29 is on or after 1st of January 2022. New rules or amendments entering into force after the date of contract for construction are to be applied if required by those rules. See Rule Change Notices on TL website for details.

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PERMISSIBLE REDUCTION OF THICKNESS

Normal and High-Tensile Shipbuilding Steels	Longitudinal Strength	Local Strength (7)	
		On large surface	Locally
Strength deck plating	Max. permissible reduction of midship section modules: 10 % (3)	For $t \leq 11.5$ mm $t_k = 1.5$ mm For $t > 11.5$ mm $t_k = 0.09t + 0.45$ mm (max. 3 mm) (t = plate and/or web thickness as stipulated in Construction Rules, mm)	20 %
Continuous longitudinal hatch coamings			20 %
Deck plating within inside line of hatches			25 % *
Forecastle and poop deck plating			25 % *
Tween deck plating			25 % *
Side shell plating			20 %
Sheer strake plates			20 %
Bilge strake plates			20 %
Bottom plating			20 %
Keel plate			20 %
Inner bottom plating			20 %
Longitudinal bulkheads			20 %
Wing tank and hopper tank sloped plating			20 %
Transverse bulkheads, transverses, bulkhead web stiffeners and stringers, brackets and hatch side girders (1)			25 % *
Longitudinal frames, girders			20 %
Plates in way of tank top			20 %
Underdeck box girders (longitudinal and transversal)			20 %
Hatch covers (2), hatch coamings and brackets			25 % *
Bridge deck plating, superstructure end bulkheads			25 % *
NOTES:			
(1) Bulk carriers for which TL rules applies to the corrugated transverse bulkhead between cargo holds no.1 and 2 are to be assessed in accordance with TL Rules as per TL-R S19.			
(2) The hatch covers of bulk carriers for which TL Rules applies are to comply with steel renewal procedure of TL rules as per TL-R S21.			
(3) Local reductions are to be allowed for up to the reduction of 10 % in midship section module. In all cases, midship section module calculation is to be carried out for reduced situation.			
(4) Scantlings of side structures in single side bulk carriers are to comply with TL-R S12.			
(5) Scantlings of side shell frames and brackets in single side skin bulk carriers and single side skin OBO carriers not built in accordance with TL-R S12, are to comply with TL-R S31.			
(6) Substantial corrosion is an extent of corrosion such that assessment of corrosion pattern indicates wastage in excess of 75% of allowable margins, but within acceptable limits.			
(7) * For ships other than ESP ships, structural elements of them not involving the longitudinal strength of ship can be allowed with 25% diminution. For ESP ships see following table.			

Maximum Allowable Diminution of Plate Thickness

Table not to be used for areas subject to TL- R S19 to S31.

Original as- built thickness (mm)	Difference (mm)	Minimum thickness (1) (mm)	Substantial corrosion (2) thickness (mm)
4.0	1.5	2.5	2.8
4.5	1.5	3.0	3.3
5.0	1.5	3.5	3.8
5.5	1.5	4.0	4.3
6.0	1.5	4.5	4.8
6.5	1.5	5.0	5.3
7.0	1.5	5.5	5.8
7.5	1.5	6.0	6.3
8.0	1.5	6.5	6.8
8.5	1.5	7.0	7.3
9.0	1.5	7.5	7.8
9.5	1.5	8.0	8.3
10.0	1.5	8.5	8.8
10.5	1.5	9.0	9.3
11.0	1.5	9.5	9.8
11.5	1.5	10.0	10.3
12.0	1.5	10.5	10.8
12.5	1.6	10.9	11.3
13.0	1.6	11.4	11.7
13.5	1.7	11.8	12.2
14.0	1.7	12.3	12.7
14.5	1.8	12.8	13.1
15.0	1.8	13.2	13.6
15.5	1.8	13.7	14.1
16.0	1.9	14.1	14.5
16.5	1.9	14.6	15.0
17.0	2.0	15.0	15.5
17.5	2.0	15.5	15.9
18.0	2.1	15.9	16.4
18.5	2.1	16.4	16.9
19.0	2.2	16.8	17.3
19.5	2.2	17.3	17.8
20.0	2.3	17.8	18.3
20.5	2.3	18.2	18.7
21.0	2.3	18.7	19.2
21.5	2.4	19.1	19.7
22.0	2.4	19.6	20.1
22.5	2.5	20.0	20.6

Original as- built thickness (mm)	Difference (mm)	Minimum thickness (1) (mm)	Substantial corrosion (2) thickness (mm)
23.0	2.5	20.5	21.1
23.5	2.6	20.9	21.5
24.0	2.6	21.4	22.0
24.5	2.7	21.9	22.5
25.0	2.7	22.3	22.9
25.5	2.7	22.8	23.4
26.0	2.8	23.2	23.9
26.5	2.8	23.7	24.3
27.0	2.9	24.1	24.8
27.5	2.9	24.6	25.3
28.0	3.0	25.0	25.7
28.5	3.0	25.5	26.2
29.0	3.0	26.0	26.7
29.5	3.0	26.5	27.2

(1) For local corrosion patterns a maximum diminution of up to 20% is allowable.

(2) Substantial corrosion is an extent of corrosion such that assessment of corrosion pattern indicates wastage in excess of 75% of allowable margins, but within acceptable limits.