

Bulker Q&As and CIs on the IACS CSR Knowledge Centre

KCID No.	Ref.	Type	Topic	Date completed	Question/CI	Answer	Attachment
313	12/1.2.3	Question	transverse lower stool	2006/12/21	Is the formula tGR to be applied to not only sloping side plating but vertical side plating of transverse lower stool?	It is expected that the grab operators often swing the grab in order to clear cargo from sides and ends of a hold. Therefore even a vertical side plating of transverse lower stool is likely to experience a great impact due to the grab hit. As such the formula for tGR should be applied not only to sloping side plating but vertical side plating of transverse lower stool.	
544 attc	12/ 1.2.1	CI	Inner bottom plating	2008/4/25	Our interpretation of 2.1.1 to 2.1.3 of CH12, Sec1 is the following: a) the whole inner bottom plating has to be dimensioned according 2.1.2 b) the sloped hopper tank plating and the sloped or non-sloped lower stool plating have to be dimensioned according 2.1.3 up to a height of 3m above the inner bottom (vertically measured) c) in case of a hybrid-bulker the inner longitudinal wall, welded directly on the inner bottom without a hopper plate, has to be dimensioned according 2.1.3 up to a height of 3m above the inner bottom d) The coaming, deck girders below coaming, top wing sloping plate and upper stool plating have not be increased due to the GRAB-notation Please confirm these interpretations.	A1) Yes the whole inner bottom plating has to be dimensioned according to Ch.12 Sec.1 [2.1.2]. A2) The interpretation of Ch.12 Sec.1 [2] is as follow: Ch.12 Sec.1 [2.1.1] is applicable to plating of inner bottom, hopper, lower stool side plating and inner hull up to a height of 3m above inner bottom. Ch.12 Sec.1 [2.1.2] is applicable to the plating of inner bottom. Ch.12 Sec.1 [2.1.3] is applicable to plating of hopper, lower stool side plating, inner hull up to a height of 3m above inner bottom. A3) Yes, inner longitudinal walls of an hybrid bulker have to be dimensioned with respect to Ch.12 Sec.1 [2.1.3]. A4)No, coaming, deck girders below coaming, to wing sloping plates and upper stool plating are not concerned by Ch.12 Sec.1.	Y
690	12/1.2.1.3	Question	Grab requirement (tGR)	2008/3/13	Is the Grab requirement (tGR) specified in Ch.12 Sec.1 [2.1.3] applicable to plating of Collision and Engine Room Bulkhead within 3.0m from inner bottom? Or is there any other paragraph requiring reinforcement against grab handling to these bulkhead plates?	Swinging of the grab by the operator may provoke great impacts on the bottom of any side of a hold. The requirements of Ch.12 Sec.1 [2.1.3] are applicable regardless of the design and the function of a cargo hold bulkhead.	
980	12/1.2.1.3	Interpretation	Applicability of GRAB requirement	2010/8/20	In a bulk carrier having a ship length of around 160m, lower stools may not be fitted below transverse bulkheads and corrugation may be fitted directly on the inner bottom. In such cases, the GRAB requirement in Ch.12 Sec.1, [2.1.3] is applicable to the lower part of the corrugated bulkhead up to 3m above the inner bottom. However, grab configurations do not come into contact with such corrugation webs because the width and depth of corrugations are always smaller than those of grab appliances (i.e. less than 1m). We are of the opinion that the GRAB requirement is only applicable to the faces of such corrugations. Please confirm.	We agree that the grab requirement is only applicable to the faces of corrugations. We will consider a corrigenda to clarify this.	

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998 attc	12/1.2.1.3	Interpretation	Applicability of GRAB requirement	2010/8/4	<p>In a bulk carrier having ship length of 160m around, lower stools may not be fitted below transverse bulkheads and corrugation may be fitted on inner bottom directly.</p> <p>In such cases, GRAB requirement in Ch.12 Sec.1, [2.1.3] is applicable to the lower part of corrugated bulkhead up to 3m above inner bottom.</p> <p>However, GRAB will not contact such corrugation webs due to their configuration as follows;</p> <ul style="list-style-type: none"> - corrugation width and depth are less than 1m, and; - corrugation flanges and webs are perpendicular to each other. <p>Please refer to an arrangement of such a bulk carrier as attached.</p> <p>We are of the opinion that GRAB requirement is not applicable to corrugation webs.</p> <p>Please confirm it.</p>	Grab requirements are not applicable to web of corrugations.	Y

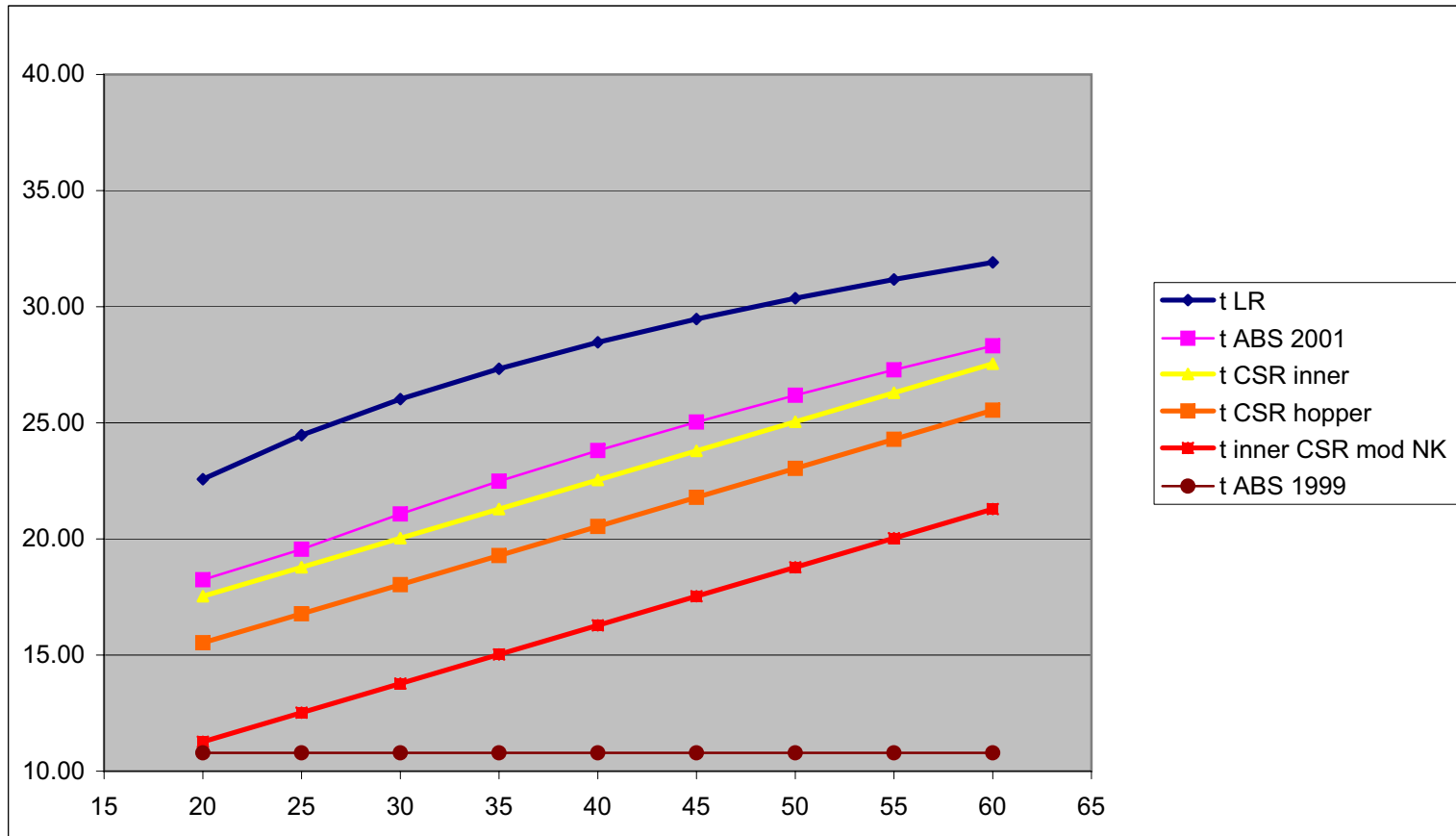
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1029	12/1.2.1.3	RCP	Transverse corrugated bulkheads at lower stools as transverse bulkhead plating	2010/3/30	<p>With regard to the paragraph of Ch.12, Sec.1 [2.1.3], we would request that transverse corrugated bulkheads situated on lower stools are ruled out from application of the 'transverse bulkhead plating'.</p> <p>The paragraph in Ch.12, Sec.1 [2.1.3] contains 'transverse bulkhead plating' as a result of Rule Change Notice No.1 (effective from 1 July 2009) which may cause a confusion as to whether this newly added word implies a transverse corrugated bulkhead on lower stool or not, all the more for small bulk carriers provided with lower stools of which the height is less than 3.0m.</p> <p>It is noted that TB for RCP 4-4 explains that 'this change is made to clarify the requirement by specifying the areas concerned by this calculation (refer to KC ID 313 and 544)'. Besides, TB for RCN No.1-4 explains that 'inner hull up to a height of 3.0m from the lowest point of inner bottom is applied to this requirement'.</p> <p>Notwithstanding these explanations, neither of the two TBs has implemented clarification on application of transverse corrugated bulkheads on lower stools. It is apparent that the Ch.12, Sec.1 [2.1.3] will result into unreasonable and impractical arrangements and scantlings for corrugated bulkheads with lower stools, especially for those of small bulk carriers. The current passage containing 'transverse bulkhead plating' should be interpreted to limit to transverse bulkhead plating where lower stools are not fitted. KC is therefore requested to update the passage in future Rule Change Notice.</p>	<p>The requirements in Ch.12 apply to the following structural elements when they exist in the hold:</p> <ul style="list-style-type: none"> - plating of inner bottom - hopper tank sloping plate - plating of transverse lower stool (if it exists) - flange plating of transverse corrugated bulkhead - plating of transverse plane bulkhead - plating of inner hull <p>up to a height of 3m above the lowest point of the inner bottom.</p> <p>This includes transverse corrugated bulkheads with or without lower stool.</p>	

KC#544

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800 mm
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200 m

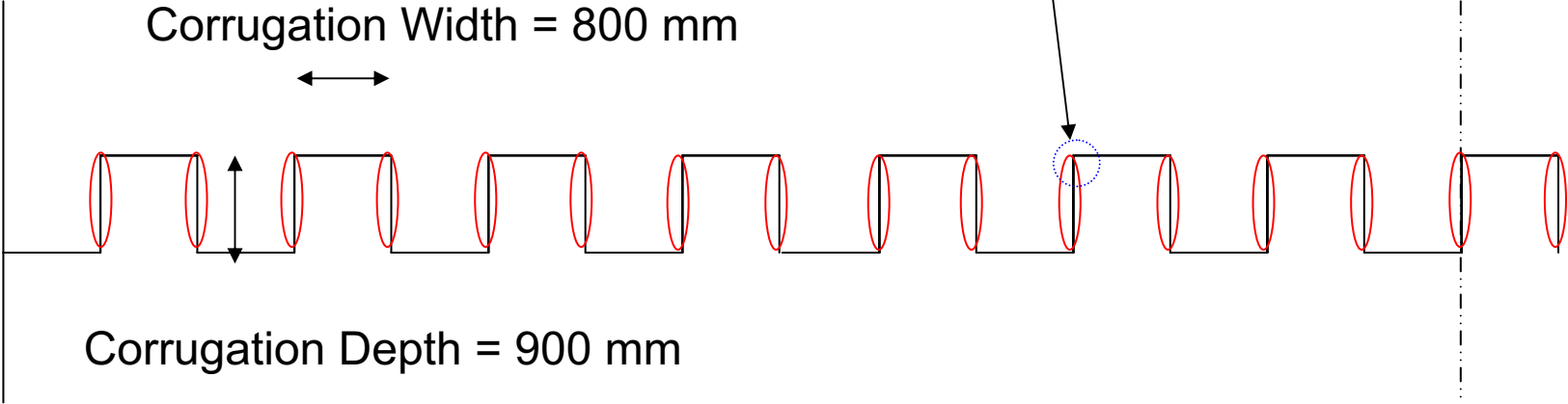
	t LR	t ABS 1999	t ABS 2001	t CSR inner	t CSR hopper	t inner CSR mod NK
20	22.57	10.79	18.24	17.53	15.53	11.27
25	24.47	10.79	19.55	18.78	16.78	12.52
30	26.02	10.79	21.07	20.04	18.03	13.77
35	27.33	10.79	22.49	21.29	19.28	15.03
40	28.47	10.79	23.80	22.54	20.54	16.28
45	29.47	10.79	25.03	23.79	21.79	17.53
50	30.36	10.79	26.19	25.04	23.04	18.78
55	31.17	10.79	27.28	26.30	24.29	20.04
60	31.91	10.79	28.31	27.55	25.54	21.29



KC#998

GRAB

Corrugation flanges and webs are perpendicular to each other.



GRAB

Grabs do not contact corrugation webs