

Tanker Freeboards. Lloyd's Register of Shipping. SURVEYS FOR FREEBOARD.

 Index No. _____
 (For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey _____	
having <u>Roof, Bridge & Forecastle.</u>					Date of Survey <u>11.2.36.</u>	
(Type of Superstructures.)					Name of Surveyor _____	
Ship's Name <u>Howaldswerke A.G. Kiel</u> <u>No 740.</u>	Nationality and Port of Registry _____	Official Number _____	Gross Tonnage _____	Date of Build _____	Particulars of Classification <u>4100 A1</u> <u>Carrying Petroleum in Bulk.</u> <u>(contaminated)</u>	
Moulded Dimensions: Length <u>395.00</u> Breadth <u>55.00</u> Depth <u>27.00</u>						
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>10950</u> tons						
Coefficient of fineness for use with Tables <u>.769</u>						
Depth for Freeboard (D)		Depth correction		Round of Beam correction		
Moulded depth <u>27.00</u>		(a) Where D is greater than Table depth <u>.73</u> (D - Table depth) R = <u>(27.06 - 26.33) 3.00</u> <u>= + 2.19"</u>		Moulded Breadth (B) <u>55.00</u>		
Stringer plate <u>.06</u>		(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <u>✓</u>		Standard Round of Beam = $\frac{B \times 12}{50} = \frac{55 \times 12}{50} = 13.20$		
Sheathing on exposed deck T $\left(\frac{L-S}{L}\right) =$ <u>✓</u>		If restricted by superstructures <u>✓</u>		Ship's Round of Beam = <u>13.00</u>		
Depth for Freeboard (D) = <u>27.06</u>				Difference <u>Deficient .20</u>		
				Restricted to		
				Correction = $\frac{\text{Diff}^o}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{.20}{4} \times .371 = +.02"$		

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed	<u>143.00</u>	<u>143.00</u>	<u>7.50</u>	<u>✓</u>	<u>143.00</u>	Standard Height of Superstructure <u>7.45'</u>
" overhang						" " R.Q.D. <u>✓</u>
R.Q.D. enclosed						Deduction for complete superstructure <u>41.67'</u>
" overhang						Percentage covered $\frac{S}{L} = \frac{63.18\%}{-}$
Bridge enclosed <u>25.60</u>	<u>25.60</u>	<u>25.60</u>	<u>7.00</u>	<u>7.00</u>	<u>24.05</u>	" " $\frac{S_1}{L} = \frac{62.90\%}{-}$
" overhang aft	<u>2.50</u>	<u>1.88</u>			<u>1.77</u>	" " $\frac{E}{L} = \frac{61.28\%}{-}$
" overhang forward	<u>1.00</u>	<u>.50</u>			<u>.47</u>	Percentage from Table, Line A. Tanker
Fore enclosed	<u>77.47</u>	<u>77.47</u>	<u>7.00</u>	<u>7.45</u>	<u>72.78</u>	(corrected for absence of forecastle (if required)) <u>53.44%</u>
" overhang						Percentage from Table, Line B.
Trunk aft						(corrected for absence of forecastle (if required))
" forward						Interpolation for bridge less than 2L (if required)
Tonnage opening aft						Deduction = <u>41.67' x 53.44% = - 22.27'</u>
" " forward						
Total	<u>249.57</u>	<u>248.45</u>			<u>242.07</u>	

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product	
A.P.		1				1		Mean actual sheer aft =
$\frac{1}{8}$ L from A.P.		4				4		Mean standard sheer aft =
$\frac{3}{8}$ L "		2				2		Mean actual sheer forward =
Amidships		4				4		Mean standard sheer forward =
$\frac{3}{8}$ L from F.P.		2				2		Length of enclosed superstructure forward of amidships =
$\frac{1}{8}$ L "		4				4		" " aft of " =
F.P.		1				1		
Total								

Correction = $\frac{\text{Difference between sums of products}}{18} \left(75 - \frac{S}{2L}\right) =$ Nil.

If limited on account of midship superstructure. ✓If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft. ✓

<div>Deduction for Tropical Freeboard.</div> <div>Addition for Winter and Winter North Atlantic Freeboard.</div> <div><div>Depth to Freeboard Deck = 27.06</div><div>Summer freeboard = 3.27</div><div>Moulded draught (d) = 23.12</div></div> <div><div>Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 5.78" = 5 3/4"</div><div>Addition for Winter North Atlantic Freeboard (if required) = 5 3/4 + 4 = 9 3/4"</div></div>	<div>Deduction for Fresh Water.</div> <div>Displacement in salt water at summer load water line</div> <div>$\Delta =$</div> <div>Tons per inch immersion at summer load water line</div> <div>T =</div> <div>Deduction = $\frac{\Delta}{40T}$ inches</div> <div>$\frac{d}{4} = 5 \frac{3}{4}"$</div>	<div>TABULAR FREEBOARD corrected for Flush Deck (if required)</div> <div>Correction for coefficient 769 + 68 = 837</div> <div>1.36</div> <table><tr><td></td><td>+</td><td>-</td></tr><tr><td>Depth Correction</td><td>2.19</td><td>.20</td></tr><tr><td>Deduction for superstructures</td><td>-</td><td>22.27</td></tr><tr><td>Sheer correction</td><td>-</td><td>-</td></tr><tr><td>Round of Beam correction</td><td>1.02</td><td>-</td></tr><tr><td>Correction for Thickness of Deck amidships</td><td>-</td><td>-</td></tr><tr><td>Other corrections, scantlings, etc.</td><td>-</td><td>.26</td></tr><tr><td></td><td>2.21</td><td>22.27</td></tr></table> <div>Summer Freeboard = 45.30 + .31</div>		+	-	Depth Correction	2.19	.20	Deduction for superstructures	-	22.27	Sheer correction	-	-	Round of Beam correction	1.02	-	Correction for Thickness of Deck amidships	-	-	Other corrections, scantlings, etc.	-	.26		2.21	22.27	<div>61.35</div> <div>65.36</div> <div>51.36</div> <div>11.2.36</div>
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc <u>11$\frac{1}{2}$"</u>	Tropical Fresh Water Freeboard <u>3'-11$\frac{1}{2}$"</u>
Fresh Water Line " " <u>5$\frac{3}{4}$"</u>	Fresh Water " " <u>2'-9$\frac{3}{4}$"</u>
Tropical Line " " <u>5$\frac{3}{4}$"</u>	Tropical " " <u>2'-5$\frac{1}{2}$"</u>
Winter Line below " " <u>5$\frac{3}{4}$"</u>	Winter " " <u>3'-3$\frac{1}{2}$"</u>
Winter North Atlantic Line " " <u>9$\frac{3}{4}$"</u>	Winter North Atlantic " " <u>4'-3"</u>

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway										
Dimensions of Hatchway										
COAMINGS	{	Height above Deck								
		Thickness								
		Sides								
		Stiffeners								
		Brackets, Stays								
HATCH BEAMS	{	Number								
		Spacing								
		Scantling and Sketch								
		Bearing Surface								
FORE AND AFTERS	{	Number								
		Spacing								
		Unsupported Lengths								
		Scantling* and Sketch								
		Bearing Surface								
HATCH COVERS	{	Material								
		Thickness								
		How fitted								
		Bearing Surface								
Spacing of Cleats										
Number of Tarpaulins										

*Are wood fore and afters steel shod at all bearing surfaces?

Are battens and wedges efficient and in good condition?

Are tarpaulins in good condition and in accordance with rule requirements?

Are lashings provided in accordance with rule requirements?

Particulars of fiddley, funnel and ventilator coamings :—

Particulars of Flush Bunker Scuttles :—

Particulars of Companionways :—

Particulars of Ventilators in exposed positions on freeboard and superstructure decks :—

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks :—

Particulars of Gangway Cargo and Coaling Ports :—

Particulars of Scuppers and Sanitary Discharge Pipes :—

Particulars of Side Scuttles :—

Particulars of Guard Rails :—

Particulars of Gangways, Lifelines, etc. :—

RETAIN

Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well						
Forward Well						

State position of each freeing port { After Well :—
(F. and A. position and height above deck edge) { Forward Well :—

State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :—

Additional area where sheer is less than standard.

Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead								
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead								
Bridge, Forward Bulkhead								
Forecastle Bulkhead								
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks								
Exposed Machinery Casings on Superstructure Decks								
Machinery Casings within Superstructures not fitted with Class I Closing Appliances								
Deckhouses on Flush Deck Ships								

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	
Raised Quarter Deck Bulkhead	
Bridge, After Bulkhead	
Bridge, Forward Bulkhead	
Forecastle Bulkhead	
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	
Exposed Machinery Casings on Superstructure Decks	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	
Deckhouses on Flush Deck Ships	