

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <b>Haplund's</b> <b>1431/32</b>	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build
Port of Survey .....				
Date of Survey <b>18.5.50</b>				
Surveyor's Signature .....				
Particulars of Classification <b>Unlimited</b>				
Moulded Dimensions: Length <b>540.83</b> Breadth <b>74</b> Depth <b>44.00/35.6</b>				
Moulded displacement at moulded draught = 85 per cent. of moulded depth ..... tons				
Coefficient of fineness for use with Tables <b>.68</b>				

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... .. <b>35.5</b>	(a) Where D is greater than Table depth (D-Table depth) R =	Moulded Breadth (B)
Stringer plate ... .. <b>.04</b>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} =$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	<b>(36.06 - 35.54) 3 = -1.56</b>	Ship's Round of Beam =
Depth for Freeboard (D) = <b>35.04</b>	If restricted by superstructures <b>No</b>	Difference
		Restricted to
		Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S}{L}\right) =$ <b>NO</b>

**DEDUCTION FOR SUPERSTRUCTURES.**

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)	
Poop enclosed ... ..						Standard Height of Superstructure .....
„ overhang ... ..						„ „ R.Q.D. ....
R.Q.D. enclosed ... ..						Deduction for complete superstructure .....
„ overhang ... ..						Percentage covered $\frac{S}{L} =$
Bridge enclosed ... ..						„ „ $\frac{S_1}{L} =$
„ overhang aft ... ..						„ „ $\frac{E}{L} =$
„ overhang forward ... ..						Percentage from Table, Line A.
Fore enclosed ... ..						(corrected for absence of forecastle (if required))
„ 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 = <b>42</b>
„ „ forward ... ..						
Total ... ..						

**SHEER CORRECTION.**

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

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) =$  **-1**

If limited on account of midship superstructure.

If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100 ft.

<p><b>Deduction for Tropical Freeboard.</b></p> <p><b>Addition for Winter and Winter North Atlantic Freeboard.</b></p> <p>Depth to Freeboard Deck = <b>Et. 35.54</b></p> <p>Summer freeboard = <b>5.78</b></p> <p>Moulded draught (d) = <b>29.76</b></p> <p>Deduction for Tropical freeboard and addition for Winter freeboard = <math>\frac{d}{4}</math> inches =</p> <p>Addition for Winter North Atlantic Freeboard (if required) =</p>	<p><b>Deduction for Fresh Water.</b></p> <p>Displacement in salt water at summer load water line</p> <p><math>\Delta =</math></p> <p>Tons per inch immersion at summer load water line</p> <p>T =</p> <p>Deduction = <math>\frac{\Delta}{40 T}</math> inches =</p>	<p><b>TABULAR FREEBOARD</b> corrected for Flush Deck (if required)</p> <p>Correction for coefficient</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"></td> <td style="width: 50%; text-align: center;">+</td> <td style="width: 50%; text-align: center;">-</td> </tr> <tr> <td>Depth Correction</td> <td style="text-align: center;">1.56</td> <td style="text-align: center;">-</td> </tr> <tr> <td>Deduction for superstructures</td> <td style="text-align: center;">42</td> <td style="text-align: center;">-</td> </tr> <tr> <td>Sheer correction</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> <tr> <td>Round of Beam correction</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> <tr> <td>Correction for Thickness of Deck amidships</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> <tr> <td>Other corrections, scantlings, etc.</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> <tr> <td></td> <td style="text-align: center;"><b>44.56</b></td> <td style="text-align: center;"><b>46.56</b></td> </tr> </table> <p>Summer Freeboard = <b>69.36</b></p>		+	-	Depth Correction	1.56	-	Deduction for superstructures	42	-	Sheer correction	-	-	Round of Beam correction	-	-	Correction for Thickness of Deck amidships	-	-	Other corrections, scantlings, etc.	-	-		<b>44.56</b>	<b>46.56</b>
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**SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-**

<p><b>28.1</b></p> <p><b>reqd</b></p> <p>Tropical Fresh Water Line above Centre of Disc ... ..</p> <p>Fresh Water Line „ „ ... ..</p> <p>Tropical Line „ „ ... ..</p> <p>Winter Line below „ „ ... ..</p> <p>Winter North Atlantic Line „ „ ... ..</p>	<p>Tropical Fresh Water Freeboard ... ..</p> <p>Fresh Water „ „ ... ..</p> <p>Tropical „ „ ... ..</p> <p>Winter „ „ ... ..</p> <p>Winter North Atlantic „ „ ... ..</p>
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