

LENGTHENING

# LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

## SURVEYS FOR FREEBOARD

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER)

For LONDON OFFICE ONLY

Received .....

Index No. ....

Govt. Copy .....

Owners C11 .....

Ship's Name <b>BERGO</b>	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length <u>53.935</u> Breadth <u>8.850</u> Depth <u>4.050</u> Freeboard Length <u>53.935</u> Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>about 1200 m<sup>3</sup></u> (excluding bossing) Coefficient of fineness for use with Tables <u>.730</u>					Date of Survey <u>20-12-55</u> Surveyor's Signature Particulars of Classification <u>+1000A1</u>

<b>DEPTH FOR FREEBOARD (D).</b> Moulded depth ... .. <u>4.050</u> Stringer plate ... .. <u>9</u> Wood Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ Depth for Freeboard (D) = <u>4.059</u>	<b>DEPTH CORRECTION.</b> (a) Where D is greater than Table depth (D-Table depth) R = <u>8.33(4.059-3.596) 13.62 = 53</u> (b) Where D is less than Table depth (if allowed) (Table depth-D) R = If restricted by superstructures	<b>ROUND OF BEAM CORRECTION.</b> Moulded Breadth (B) <u>8.850</u> Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>177</u> Ship's Round of Beam = <u>200</u> Difference <u>23</u> Restricted to Correction = $\frac{\text{Diff}^2}{4} \times \left( 1 - \frac{S_1}{L} \right) =$ <u><math>\frac{23^2}{4} \times .64 = 4</math></u>
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## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ... ..					
" overhang ... ..					
R.Q.D. enclosed ... ..	<u>11.975</u>	<u>11.975</u>	<u>16.80</u>		<u>11.975</u>
" overhang ... ..					
Bridge enclosed ... ..					
" overhang aft ... ..					
" overhang forward ... ..					
Fore enclosed ... ..	<u>7.310</u>	<u>7.310</u>	<u>2.150</u>		<u>7.310</u>
" overhang ... ..	<u>260</u>	<u>.130</u>	<u>2.150</u>		<u>.130</u>
Trunk aft ... ..					
" forward ... ..					
Tonnage opening aft ... ..					
" " forward ... ..					
Total ... ..	<u>19.545</u>	<u>19.415</u>			<u>19.415</u>

Standard Height of Superstructure 1830 ✓  
 " " R.Q.D. 1070 ✓  
 Deduction for complete superstructure 603 ✓  
 Percentage covered  $\frac{S}{L} =$  36.24 ✓  
 " "  $\frac{S_1}{L} =$  36.00 ✓  
 Percentage from Table, Line A. 20.10 ✓  
 (corrected for absence of forecastle (if required))  
 Percentage from Table, Line B.  
 (corrected for absence of forecastle (if required))  
 Interpolation for bridge less than .2L (if required)  
 Deduction = 602 × .2010 = 121 ✓  
 Timber  
 58.70 ✓  
 354 ✓  
 353

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ... ..	<u>703</u>	<u>1</u>		<u>703</u>	<u>724</u>	<u>724</u>	<u>1</u>		<u>724</u>
$\frac{1}{4}$ L from A.P. ... ..	<u>312</u>	<u>4</u>		<u>1248</u>	<u>260</u>	<u>260</u>	<u>4</u>		<u>1040</u>
$\frac{3}{4}$ L " ... ..	<u>78</u>	<u>2</u>		<u>156</u>	<u>50</u>	<u>50</u>	<u>2</u>		<u>100</u>
Amidships ... ..	<u>0</u>	<u>4</u>		<u>0</u>	<u>0</u>	<u>0</u>	<u>4</u>		<u>0</u>
$\frac{3}{4}$ L from F.P. ... ..	<u>156</u>	<u>2</u>		<u>312</u>	<u>130</u>	<u>130</u>	<u>2</u>		<u>260</u>
$\frac{1}{4}$ L " ... ..	<u>625</u>	<u>4</u>		<u>2500</u>	<u>540</u>	<u>540</u>	<u>4</u>		<u>2160</u>
F.P. ... ..	<u>1407</u>	<u>1</u>		<u>1407</u>	<u>1420</u>	<u>1420</u>	<u>1</u>		<u>1420</u>
Total ... ..				<u>6326</u>					<u>5704</u>

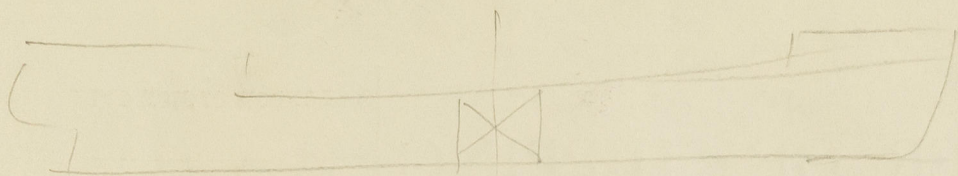
Mean actual sheer aft  
 Mean standard sheer aft =  
 Mean actual sheer forward  
 Mean standard sheer forward =  
 Length of enclosed superstructure forward of amidships =  
 " " aft of " =  
 Deficient.  
 Deficient sheer.  
 Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) =$   $\frac{622}{18} (.75 - .1813) = +20$   
 If limited on account of midship superstructure. 5688  
 If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100ft.

<b>Deduction for Tropical Freeboard.</b> Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = <u>4.059</u> Ft. Summer freeboard = <u>4.56</u> Moulded draught (d) = <u>3.603</u> Keel allowance = Extreme draught = Deduction for Tropical freeboard and addition for = Winter freeboard = $\frac{d}{4}$ inches = Addition for Winter North Atlantic Freeboard (if required) =	<b>Deduction for Fresh Water.</b> Displacement in salt water at summer load water line $\Delta =$ Tons per inch immersion at summer load water line $T =$ Deduction = $\frac{\Delta}{40 T}$ inches =	<b>TABULAR FREEBOARD corrected for Flush Deck (if required)</b> Correction for coefficient <u><math>\frac{73+68}{1.36} = 1.41</math></u> <table border="1"> <thead> <tr> <th></th> <th>+</th> <th>-</th> </tr> </thead> <tbody> <tr> <td>Depth Correction</td> <td><u>53</u></td> <td></td> </tr> <tr> <td>Deduction for superstructures</td> <td></td> <td><u>121</u></td> </tr> <tr> <td>Sheer correction</td> <td><u>20</u></td> <td></td> </tr> <tr> <td>Round of Beam correction</td> <td></td> <td><u>4</u></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></td> </tr> <tr> <td></td> <td><u>73</u></td> <td><u>125</u></td> </tr> </tbody> </table> Summer Freeboard = <u>4.56</u> ✓ Timber 490 ✓ 508 ✓ 53 ✓ 20 ✓ 73 ✓ 285 ✓ 508 ✓ 285 ✓ 223 ✓		+	-	Depth Correction	<u>53</u>		Deduction for superstructures		<u>121</u>	Sheer correction	<u>20</u>		Round of Beam correction		<u>4</u>	Correction for Thickness of Deck amidships			Other corrections, scantlings, etc.				<u>73</u>	<u>125</u>
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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	...	Tropical Fresh Water Freeboard	...
Fresh Water Line	"	Fresh Water	"
Tropical Line	"	Tropical	"
Winter Line	below	Winter	"
Winter North Atlantic Line	"	Winter North Atlantic	"

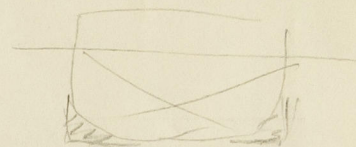




A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made,  
the Surveyor should endorse the form on this side with his signature and the date.

Volume added  $3.3 \times 8.85 \times 4.05 \times .85 = 100 \text{ m}^3$

say  $92 \text{ m}^3$  ✓



New vol. of disp. at .85 D =  $1108 + 92 = 1200 \text{ m}^3$

3.30  
6.  
19.80

50.635  
3.300  
53.935

100.50

Trade of ship \_\_\_\_\_

Names of sister ships \_\_\_\_\_

Builder's name and yard number \_\_\_\_\_

Owners \_\_\_\_\_

Fee £ \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_

List of plans forwarded for reference. (See "Instructions to Surveyors, Part 4, 1950," paragraph 11.)



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Foundation