

Amended assignment

Rpt. C.11

Index. No. 17968
(For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~
having Bridge, Raised Quarter Deck Forecastle

(Type of Superstructures.)

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
AFRICA.	British Bombay	120617	451	1905-10

Moulded Dimensions: Length 159.0 Breadth 24.84 Depth 11.75
Moulded displacement at moulded draught = 85 per cent. of moulded depth 852 tons
Coefficient of fineness for use with Tables .756

Port of Survey _____
Date of Survey 28.2.33.
Name of Surveyor ✓
Particulars of Classification +100A1.

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <u>11.75</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(11.83 - 10.60) 1.223 = 1.50. ✓</u>	Moulded Breadth (B) <u>24.84</u> Standard Round of Beam = $\frac{B \times 12}{50} = 5.96$ Ship's Round of Beam = <u>6.00</u> Difference = <u>.04</u>
Stringer plate <u>.03</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Restricted to
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = 21(.2449)$ <u>.05</u>	If restricted by superstructures	Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.04(.2449)}{4} = \text{NIL}$
Depth for Freeboard (D) = <u>11.83</u>		

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed					
„ overhang					
R.Q.D. enclosed	<u>89.30</u>	<u>89.30</u>	<u>3'-6"</u>	<u>✓</u>	<u>89.30</u>
„ overhang					
Bridge enclosed	<u>10.50</u>	<u>10.50</u>	<u>7'-0\" + 3\" sh</u>	<u>✓</u>	<u>10.50</u>
„ overhang aft					
„ overhang forward					
F'cle enclosed equiv.	<u>20.27</u>	<u>20.27</u>	<u>5'-6\" + 3\" sh</u>	<u>5.76.00</u>	<u>19.26</u>
„ overhang					
Trunk aft					
„ forward					
Tonnage opening aft					
„ forward					
Total	<u>120.07</u>	<u>120.07</u>			<u>119.06</u>

Standard Height of Superstructure 6.00
„ „ R.Q.D. 3.393
Deduction for complete superstructure 21.90
Percentage covered $\frac{S}{L} = 75.51$
„ „ $\frac{S_1}{L} = 75.51$
„ „ $\frac{E}{L} = 74.88$
Percentage from Table, Line A. 69.00
(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 = 15.11

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<u>25.90</u>	1		<u>25.90</u>	<u>22.50</u>	<u>23.18</u>	1		<u>23.18</u>
$\frac{1}{2}$ L from A.P.	<u>11.52</u>	4		<u>46.08</u>	<u>9.87</u>	<u>10.58</u>	4		<u>42.32</u>
$\frac{3}{8}$ L „	<u>2.85</u>	2		<u>5.70</u>	<u>2.47</u>	<u>2.62</u>	2		<u>5.24</u>
Amidships	-	4		-	-	-	4		-
$\frac{3}{8}$ L from F.P.	<u>5.70</u>	2		<u>11.40</u>	<u>5.73</u>	<u>5.73</u>	2		<u>11.46</u>
$\frac{1}{2}$ L „	<u>23.05</u>	4		<u>92.20</u>	<u>22.91</u>	<u>22.91</u>	4		<u>91.64</u>
F.P.	<u>51.80</u>	1		<u>51.80</u>	<u>53.00</u>	<u>53.00</u>	1		<u>53.00</u>
Total				<u>233.08</u>					<u>227.44</u>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{233.08 - 227.44}{18} \left(.75 - \frac{3775}{2 \times 159} \right) = \frac{5.64}{18} \left(.75 - .3775 \right) = .12. +$
If limited on account of midship superstructure.

Mean actual sheer aft = Deficient, > 75%
Mean standard sheer aft
Mean actual sheer forward = Excess
Mean standard sheer forward
Length of enclosed superstructure forward of amidships = .127
„ „ aft of „ = .500

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. R.Q. <u>15.28</u> Depth to Freeboard Deck = <u>15.28</u> Summer freeboard = <u>3.79</u> Moulded draught (d) = <u>11.49</u> Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>2.87:2 $\frac{3}{4}$</u> Addition for Winter North Atlantic Freeboard (if required) =	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta =$ Tons per inch immersion at summer load water line T = Deduction = $\frac{\Delta}{40T}$ inches = <u>2 $\frac{3}{4}$</u>	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{756 + 63}{1.36} = \frac{1.436}{1.36}$ Depth Correction <u>1.50</u> Deduction for superstructures <u>15.11</u> Sheer correction <u>.18</u> Round of Beam correction Correction for Thickness of Deck amidships <u>41.40</u> Other corrections, scantlings, etc. Summer Freeboard = <u>45.64</u>
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• SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Raised Quarter Deck:—

Tropical Fresh Water Line above Centre of Disc	<u>4 $\frac{1}{4}$ 4 $\frac{1}{2}$</u>	Tropical Fresh Water Freeboard	<u>3 - 9 $\frac{1}{2}$</u>	<u>3 - 9 $\frac{3}{4}$</u>
Fresh Water Line „ „	<u>2 $\frac{3}{4}$ 2 $\frac{3}{4}$</u>	Fresh Water „ „	<u>3 - 5 $\frac{1}{4}$</u>	<u>3 - 5 $\frac{1}{4}$</u>
Tropical Line „ „	<u>1 $\frac{1}{2}$ 1 $\frac{1}{2}$</u>	Tropical „ „	<u>3 - 6 $\frac{3}{4}$</u>	<u>3 - 7</u>
Winter Line below „ „	<u>2 $\frac{3}{4}$ 2 $\frac{3}{4}$</u>	Winter „ „	<u>4 - 0 $\frac{1}{4}$</u>	<u>4 - 0 $\frac{1}{4}$</u>
Winter North Atlantic Line „ „	<u>4 $\frac{3}{4}$ 4 $\frac{3}{4}$</u>	Winter North Atlantic „ „	<u>4 - 2 $\frac{1}{4}$</u>	<u>4 - 2 $\frac{1}{4}$</u>

-6 MAR 1933