

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. 28110.
(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker

Prop. R. & S. Bridge & Co.

(Type of Superstructures.)

Ship's Name Frederika
OLMENGRA.
Nationality and Port of Registry
Official Number
Gross Tonnage
Date of Build 1904.

Port of Survey

Date of Survey 29.2.32.

Name of Surveyor

Particulars of Classification 100 A1.

Dimensions: Length 265.0 Breadth 38.0 Depth 19.75
displacement at moulded draught = 85 per cent. of moulded depth
net of fineness for use with Tables 468 tons

Depth for Freeboard (D)

th 19.75
... .. 04
exposed deck
) =
Depth for Freeboard (D) = 19.79

Depth correction

(a) Where D is greater than Table depth
(D - Table depth) R =
 $(19.79 - 17.64) \times 2.038 = +4.32$
(b) Where D is less than Table depth (if allowed)
(Table depth - D) R =

If restricted by superstructures

Round of Beam correction

Moulded Breadth (B) 38.0
Standard Round of Beam = $\frac{B \times 12}{50} = 9.12$
Ship's Round of Beam = 9.50
Difference 0.38
Restricted to
Correction = $\frac{\text{Diff}^2}{4} \times (1 - \frac{S_1}{L}) = \frac{.38^2}{4} \times .234 = -.02$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
osed	<u>14.50</u>	<u>14.50</u>	<u>7.5</u>	<u>-</u>	<u>14.50</u>
hang					
losed	<u>59.00</u>	<u>59.00</u>	<u>4.0</u>	<u>59.00 x .4 = 23.6</u>	<u>56.20</u>
erhang					
losed	<u>64.00</u>	<u>60.30</u>	<u>7.5</u>	<u>-</u>	<u>60.30</u>
hang aft					
hang forward					
sed	<u>24.50</u>	<u>24.50</u>	<u>7.5</u>	<u>-</u>	<u>24.50</u>
ang					
ard	<u>100.00</u>	<u>43.82</u>	<u>2.58</u>	<u>43.82 x .258 = 11.3</u>	<u>18.38</u>
ening aft					
forward					
... ..	<u>165.00</u>	<u>202.12</u>			<u>173.88</u>

Standard Height of Superstructure 6.14

" " R.Q.D. 4.20

Deduction for complete superstructure 32.50

Percentage covered $\frac{S}{L} = 62.26$

" " $\frac{S_1}{L} = 76.24$

" " $\frac{E}{L} = 65.61$

Percentage from Table, Line A. 55.54
(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 = $32.50 \times .5554 = -18.05$

SHEER CORRECTION.

Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
<u>36.50</u>	1		<u>30.50</u>	<u>30.50</u>	1	<u>30.50</u>
<u>16.24</u>	4		<u>13.82</u>	<u>13.82</u>	4	<u>55.28</u>
<u>4.01</u>	2		<u>3.45</u>	<u>3.45</u>	2	<u>6.90</u>
<u>-</u>	4		<u>-</u>	<u>-</u>	4	<u>-</u>
<u>8.03</u>	2		<u>10.04</u>	<u>10.04</u>	2	<u>20.14</u>
<u>32.48</u>	4		<u>40.30</u>	<u>40.30</u>	4	<u>161.20</u>
<u>13.00</u>	1		<u>91.00</u>	<u>91.00</u>	1	<u>91.00</u>
		<u>328.50</u>				<u>365.02</u>

Mean actual sheer aft = Deficient 84.65%.
Mean standard sheer aft =

Mean actual sheer forward = Excess.
Mean standard sheer forward =

Length of enclosed superstructure forward of amidships = .003 L.

" " aft of " = .50 L.

36.50	1	36.50	30.50	1	30.50
16.24	3	48.72	13.82	3	41.46
4.01	3	12.03	3.45	3	10.35
	1			1	
		<u>99.25</u>			<u>82.31</u>

Difference between sums of products $(.75 - \frac{S}{2L}) = \frac{36.52}{18} \times (.75 - .3113) = -.89$
account of midship superstructure. $.89 \times \frac{.103}{.200} = -.46$

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

Tropical Freeboard.
Winter and Winter North
board.

Freeboard Deck = 19.79
Freeboard = 1.96
Moulded draught (d) = 14.83

Freeboard and addition for
North Atlantic Freeboard (if

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 = $\frac{\Delta}{40 T}$ inches

=

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction	<u>4.32</u>	<u>-</u>
Deduction for superstructures	<u>-</u>	<u>18.05</u>
Sheer correction	<u>-</u>	<u>.46</u>
Round of Beam correction	<u>-</u>	<u>.02</u>
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		
	<u>4.32</u>	<u>18.53</u>

Summer Freeboard = 23.53

Freeboard amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc
Fresh Water Line " " " " " " " "
Tropical Line " " " " " " " "
Winter Line below " " " " " " " "
Winter North Atlantic Line " " " " " " " "

Tropical Fresh Water Freeboard
Fresh Water " " " " " " " "
Tropical " " " " " " " "
Winter " " " " " " " "
Winter North Atlantic " " " " " " " "

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