

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index No. _____
(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker

ing Poop Bridge and Forecastle

Port of Survey _____

Date of Survey 21-12-31

(Type of Superstructures.)

Ship's Name

Nationality and Port of Official Number

Gross Tonnage

Date of Build

Name of Surveyor _____

S.M.V. "MACUBA"

Dutch

1930/31

Particulars of Classification 100A1

Moulded Dimensions: Length 450 Breadth 61.75 Depth 34.0

Moulded displacement at moulded draught = 85 per cent. of moulded depth 18030 173 18130m³ (gross)

Coefficient of fineness for use with Tables .793

Round of Beam correction

Depth for Freeboard (D)
Moulded depth 34.0
Stringer plate06
Sheathing on exposed deck
 $T \left(\frac{L-S}{L} \right) =$
Depth for Freeboard (D) = 34.06

Depth correction
(a) Where D is greater than Table depth
(D-Table depth) R = (34.06 - 30.00)3 = +12.18
(b) Where D is less than Table depth (if allowed)
(Table depth-D) R =
If restricted by superstructures

Moulded Breadth (B) 61.75
Standard Round of Beam = $\frac{B \times 12}{50} = 14.82$
Ship's Round of Beam = 15.50
Difference
Restricted to
Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = .17 \times .6 = .10$

2 1/2" sheathing assumed on fore deck MAGDALA DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>102.50</u>	<u>102.50</u>	<u>7.25</u>	<u>7.25/7.5</u>	<u>99.07</u>
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed...	<u>34.89</u>	<u>34.89</u>	<u>7.25</u>	<u>7.25/7.5</u>	<u>33.73</u>
" overhang aft ...					
" overhang forward					
Fore enclosed ...	<u>42.58</u>	<u>42.58</u>	<u>7.46</u>	<u>7.46/7.5</u>	<u>42.35</u>
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward					
Total ...	<u>179.97</u>	<u>179.97</u>			<u>175.15</u>

Standard Height of Superstructure 7.5
" " R.Q.D. -

Deduction for complete superstructure 42

Percentage covered $\frac{S}{L} = 40.00$

" " $\frac{S_1}{L} = 40.00$

" " $\frac{E}{L} = 38.92$

Percentage from Table, Line A. TANKER 29.92
(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 = 42 x .2992 = 12.57

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>55.00</u>	1		<u>55.00</u>	<u>60.12</u>		1		<u>60.12</u>
1/4 L from A.P. ...	<u>24.47</u>	4		<u>97.88</u>	<u>25.87</u>		4		<u>103.48</u>
3/4 L " ...	<u>6.05</u>	2		<u>12.10</u>	<u>6.47</u>		2		<u>12.94</u>
Amidships ...	-	4		-	-		4		-
3/4 L from F.P. ...	<u>12.10</u>	2		<u>24.20</u>	<u>13.03</u>		2		<u>26.06</u>
1/4 L " ...	<u>48.95</u>	4		<u>195.80</u>	<u>52.14</u>		4		<u>208.56</u>
F.P. ...	<u>110.00</u>	1		<u>110.00</u>	<u>120.0</u>		1		<u>120.00</u>
Total ...				<u>494.98</u>					<u>531.16</u>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{36.18}{18} (.75 - .20) = -1.11$

If limited on account of midship superstructure.

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 34.06
Summer freeboard = 6.64
Moulded draught (d) = 27.42

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 6.85

Addition for Winter North Atlantic Freeboard (if required) = 4.5

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 17400$

Tons per inch immersion at summer load water line

$T = 56.6$

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

= 7.68

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction ...	<u>12.18</u>	-
Deduction for superstructures ...	-	<u>12.57</u>
Sheer correction ...	-	<u>1.11</u>
Round of Beam correction ...	-	<u>.10</u>
Correction for Thickness of Deck amidships ...	-	-
Other corrections, scantlings, etc. ...	-	-
	<u>12.18</u>	<u>13.78</u>

Summer Freeboard = 79.74

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:-

Tropical Fresh Water Line above Centre of Disc ... 14 1/2
Fresh Water Line " " ... 7 3/4
Tropical Line " " ... 6 3/4
Winter Line below " " ... 6 3/4
Winter North Atlantic Line " " ... 11 1/4

Tropical Fresh Water Freeboard ... 61.75
Fresh Water " " ... 51.5
Tropical " " ... 61.75
Winter " " ... 71.25
Winter North Atlantic " " ... 81.34