

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

GRK. REPORT N° 22392

"NALANDA"

Ship's Name MAHADEVI.	Official Number 169579 1062	Nationality and Port of Registry BRITISH INDIAN LONDON BOMBAY	Gross Tonnage APPROX 5400 5459 5417.552	Date of Build 1943	Port of Survey GREENOCK
Moulded Dimensions: Length 404.56 Breadth 53.75 Depth 31.25					Date of Survey WHILE BUILDING
Moulded displacement at moulded draught = 85 per cent. of moulded depth 12296 tons					Surveyor's Signature Remedy Singh
Coefficient of fineness for use with Tables .745					Particulars of Classification +100 A1. (CONTEMPLATED)

DEPTH FOR FREEBOARD (D).

Moulded depth	...	...	...	31.25
Stringer plate	...	...	...	.50
Sheathing on exposed deck	...	...	...
$T \left(\frac{L-S}{L} \right) =$	...	...	...
Depth for Freeboard (D) =	...	...	...	31.29

DEPTH CORRECTION.

- (a) Where D is greater than Table depth
(D - Table depth) R =
 $(31.29 - 31.25) \times 3 = +12.96$
- (b) Where D is less than Table depth (if allowed)
(Table depth - D) R =
 $(31.25 - 31.29) \times 3 = -12.96$
- If restricted by superstructures

ROUND OF BEAM CORRECTION.

Moulded Breadth (B)	53.75
Standard Round of Beam = $\frac{B \times 12}{50}$	12.90
Ship's Round of Beam	13.2
Difference	.60
Restricted to	
Correction = $\frac{\text{Diff.}}{4} \times \left(1 - \frac{S_1}{L}\right)$	$\frac{.60}{4} \times .5238 = -.08$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	40.8 1/2	40.71	7.9"	-	40.71
" overhang					
R.Q.D. enclosed	.76				.76
" overhang	112.54	112.54			
Bridge enclosed	121.4	112.54	7.9"	-	112.54
" overhang aft	11.8	5.43			5.43
" overhang forward	(SEE OVER)	2.6			2.6
F'cle enclosed	30.40	30.40	7.6"	-	30.40
" overhang	3.81	3.81			3.81
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total	194.70	192.89			192.89

Standard Height of Superstructure	7.5
" " R.Q.D.	
Deduction for complete superstructure	4.2
Percentage covered $\frac{S}{L} =$	48.12
" " $\frac{S_1}{L} =$	47.68
" " $\frac{E}{L} =$	
Percentage from Table, Line A.	
(corrected for absence of forecastle (if required))	
Percentage from Table, Line B.	34.08
(corrected for absence of forecastle (if required))	
Interpolation for bridge less than .2L (if required)	
Deduction =	$4.2 \times 34.08 = -14.29$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	50.46	1		50.46	60	60.00	1		60.00
1/8 L from A.P.	22.45	4		89.80	26.75	26.75	4		107.00
2/8 L	5.55	2		11.10	6.75	6.75	2		13.50
Amidships	-	4		-	0	-	4		-
2/8 L from F.P.	11.10	2		22.20	13.5	13.50	2		27.00
1/8 L	44.90	4		179.60	53.5	53.50	4		214.00
F.P.	100.91	1		100.91	120	120.00	1		120.00
Total				454.07					541.50

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{87.43}{18} \left(.75 - \frac{.2406}{.5094} \right) = -2.47$

If limited on account of midship superstructure.

Mean actual sheer aft =
Mean standard sheer aft =

Mean actual sheer forward =
Mean standard sheer forward =

Length of enclosed superstructure forward of amidships = 7.1
" " aft of " = 7.1

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 31.29 Ft.
Summer freeboard = 6.04
Moulded draught (d) = 25.25

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 6.31 = 6 1/4

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line
 $\Delta = 25 - 11516$
Tons per inch immersion at summer load water line
 $T = 25 - 42.2$
 $26 - 43.25$
Deduction = $\frac{\Delta}{40 T}$ inches
 $\frac{11708}{40 \times 42.52} = 6.87$
 $= 6 3/4$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction	12.96	-
Deduction for superstructures	-	14.29
Sheer correction	-	2.47
Round of Beam correction	-	.08
Correction for Thickness of Deck amidships	-	-
Other corrections, scantlings, etc.	-	-
	12.96	16.84

Summer Freeboard = 75.52

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

Tropical Fresh Water Line above Centre of Disc	...	13"
Fresh Water Line	"	6 3/4"
Tropical Line	"	6 1/4"
Winter Line	below	6 1/4"
Winter North Atlantic Line	"	-

Tropical Fresh Water Freeboard

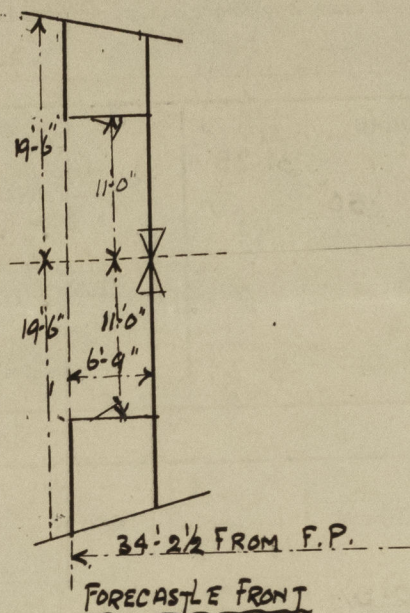
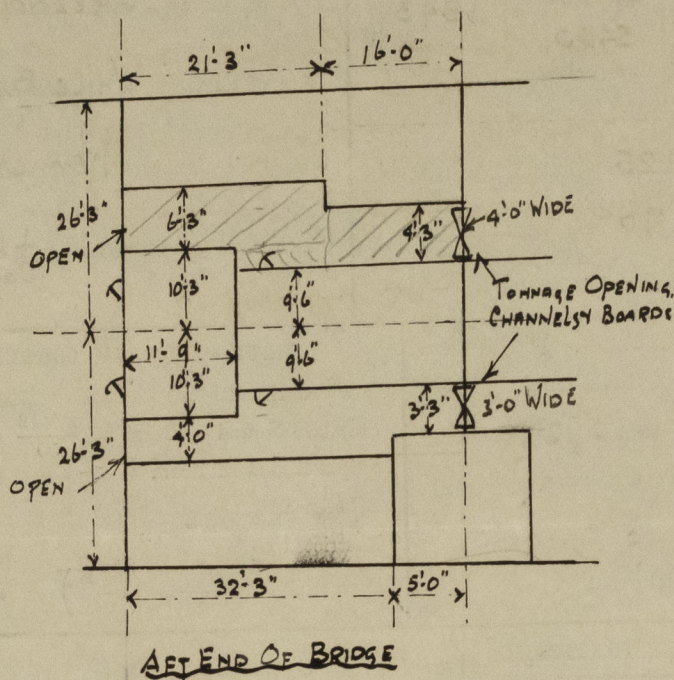
Fresh Water

Tropical

Winter

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.



Note Endorsement for increased loading required.

Bridge.

$$\begin{array}{l}
 \text{Run} \left\{ \begin{array}{l} \text{P.S.} \left\{ \begin{array}{l} 21.25 \times 6.25 = 132.81 \text{ s.f.} \\ 9.5 \times 7.5 = 7.12 \text{ s.f.} \\ 16.0 \times 4.25 = 68.00 \text{ s.f.} \end{array} \right. \\ \text{S.S.} \left\{ \begin{array}{l} 11.75 \times 4 = 47.00 \text{ s.f.} \\ 20.5 \times 4.75 = 97.38 \text{ s.f.} \\ 5 \times 3.25 = 16.25 \text{ s.f.} \end{array} \right. \end{array} \right. \\
 \hline
 368.56 \\
 \hline
 52.5 \\
 \hline
 119.78 \\
 \hline
 7.02 \\
 \hline
 112.76
 \end{array}$$

$$\begin{array}{l}
 121'-4'' \\
 116'-8'' \\
 \hline
 4'-8'' \times 2/3 = 3.11 \\
 \hline
 116.67 \\
 \hline
 119.78
 \end{array}$$

$$\begin{array}{l}
 \text{Forecastle} \\
 \text{Run} = \frac{6.75 \times 11}{12.5} = \frac{34.21}{3.81} = 30.40 \\
 \text{against 24 length} \\
 \text{measured}
 \end{array}$$

Trade of ship International.

Names of sister ships Shahzada, Greenock Report No 21938.

Builder's name and yard number Lithgorn Limited Yard No 984.

Owners Asiatic Steam Navigation Co Ltd

Appraiser 16.0.0

Fee £ 16.0.0



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