

NAIRA.
No. 43894.

LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

SURVEYS FOR FREEBOARD

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER)

Received

Index No.

Govt. Copy

Owners C11

Ship's Name NABURI	Official Number	Nationality and Port of Registry INDONESIAN DJAKARTA.	Gross Tonnage 510	Date of Build 1953	Port of Survey TRIESTE
Moulded Dimensions: Length 48.00 M Breadth 9.404 M Depth 2.96 M					Date of Survey DURING CONSTRUCTION.
Freeboard Length					Surveyor's Signature D. VERLA
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing) 800.8 M³					Particulars of Classification 100 AI
Coefficient of fineness for use with Tables .691					CONT^E

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth 2.960	(a) Where D is greater than Table depth (D-Table depth) R =	Moulded Breadth (B) M
Stringer plate007	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Standard Round of Beam = $\frac{B \times D}{50} = \frac{188}{50} = 188$
Wood Sheathing on exposed deck	8.33 (3.267 - 2.967) / 12.374 = -31 mm	Ship's Round of Beam = 200
$T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Difference 12
Depth for Freeboard (D) = 2.967		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{12}{4} \times .0817 = \text{Nil.}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	12100	12100	2100	/	12100
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed	18150	18150	2100	/	18150
" overhang aft	450	338	.	/	338
" overhang forward	1000	500	.	/	500
F'cle enclosed	3900	3900	.	/	3900
" overhang	11000	6000	.	/	6000
Trunk aft					
" forward		$\frac{1}{2} \text{ DIFF}^e$			
Tonnage opening aft	1200	656	.	/	656
" " forward	1200	3350	.	/	3350
Total	49000	44994			44994

Standard Height of Superstructure **1.83 M**

" " R.Q.D. **/**

Deduction for complete superstructure **561 mm.**

Percentage covered $\frac{S}{L} = 100.$

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

" " $\frac{E}{L} =$ } **91.83**

Percentage from Table, Line A. + B **89.95**

(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 = **561 x .8995 = -505 mm.**

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	662	1	662	480	1405	1	1405
$\frac{1}{4}L$ from A.P.	294	4	1176	180	625	4	2500
$\frac{2}{4}L$ "	74	2	148	30	155	2	310
Amidships	0	4	0	0	0	4	0
$\frac{3}{4}L$ from F.P.	147	2	294	150	155	2	310
$\frac{1}{4}L$ "	589	4	2356	570	627	4	2508
F.P.	1324	1	1324	1140	1410	1	1410
Total			5960	+270			8443

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{2483}{18} \left(.75 - .50 \right) = -34 \text{ mm.}$

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 =

" " aft of " =

C.S.S. / T.O.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **2967**

Summer freeboard = **50**

Moulded draught (d) = **2917**

Keel allowance =

Extreme draught =

Deduction for Tropical freeboard and addition for =

Winter freeboard = $\frac{d}{48} = 6 \text{ cms}$

Addition for Winter North Atlantic Freeboard (if required) = **6 + 5 = 11 cms.**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 958 \text{ T}$

Tons per inch immersion at summer load water line

$T = 9.65$

Deduction = $\frac{\Delta}{40 \text{ T}} = 6 \text{ cms.}$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.691 + .68}{1.36} = 1.371 / 1.36$

Depth Correction

Deduction for superstructures

Sheer correction

Round of Beam correction

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc.

Summer Freeboard = **-135 mm.**

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

Tropical Fresh Water Line above Centre of Disc ... **6 cms.**

Fresh Water Line " " ... **6 cms.**

Tropical Line " " ... **0. LIMITED**

Winter Line below " " ... **6 cms.**

Winter North Atlantic Line " " ... **11 cms.**

Tropical Fresh Water Freeboard **MINUS 1 cm.**

Fresh Water " **MINUS 1 cm.**

Tropical " **5 cm. (LIMITED)**

Winter " **11 cm.**

Winter North Atlantic " **16 cm.**

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.

TONNAGE OPENINGS.

AFT. (SECTION A)

S.		S ₁
12100	12100	12100
1200		656
450	338	338
18150	18150	18150
31900	30588	31244

$$\text{DIFF} = 1312.$$

$$\begin{array}{r} 2 \overline{)1312} \\ \underline{656} \end{array}$$

FOR^B (SECTION B)

S		S ₁
1000	500	500
1200		3350
11000	6000	6000
3900	3900	3900
17100	10400	13750

$$\text{DIFF} = 6700$$

$$\begin{array}{r} 2 \overline{)6700} \\ \underline{3350} \end{array}$$

SHEER AFT.

$$\text{SHEER @ POOP FRONT} = 90 \text{ m (SEE NAIRA. No 43894)}$$

$$\text{EXCESS TW. DK. HT.} = \frac{270}{360 \text{ mm.}}$$

$$\therefore \text{VIRTUAL SHEER @ A.P.} = \frac{360 \times 24.5^2}{12.4^2}$$

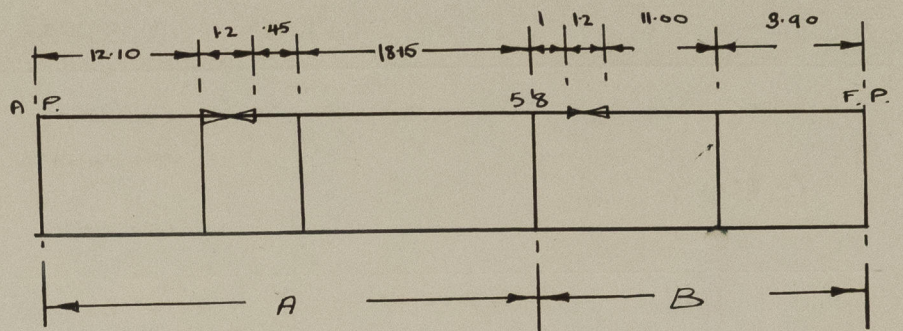
$$= 1405 \text{ mm.}$$

$$\begin{array}{r} 1405 \\ 1830 \end{array} \text{ - Standard to Deck}$$

$$\begin{array}{r} 3935 \\ 2960 \end{array}$$

$$6.195 \text{ M to keel line.}$$

From drawing = 6.32 M \therefore 1405 can be used.



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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