

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

GRD. RPT. No 850

Ship's Name BARAU	Official Number ✓	Nationality and Port of Registry INDONESIA JAKARTA	Gross Tonnage 200 195	Date of Build 1953	Port of Survey GRONINGEN
Moulded Dimensions: Length 35.000 Breadth 6.500 Depth 2.959 mtr					Date of Survey JULY. 1953
Moulded displacement at moulded draught = 85 per cent. of moulded depth 360 m³					Surveyor's Signature <i>[Signature]</i>
Coefficient of fineness for use with Tables (629 Actual) 68.					Particulars of Classification 100A1 contemplated "For service in the Indonesian Archipelago"

DEPTH FOR FREEBOARD (D).	
Moulded depth	2959
Stringer plate	8
Sheathing on exposed deck	(50)
$T \left(\frac{L-S}{L} \right) = \frac{21.21}{35} \times 50 =$	30
Depth for Freeboard (D) =	2997

DEPTH CORRECTION.	
(a) Where D is greater than Table depth (D-Table depth) R =	$8.33(2.997-2.333)8.838 = 49 \text{ mm.}$
(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	6.64
If restricted by superstructures	

ROUND OF BEAM CORRECTION.	
Moulded Breadth (B)	6500
Standard Round of Beam = $\frac{B \times 17}{50}$	130
Ship's Round of Beam	130
Difference	NIL
Restricted to	
Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left(1 - \frac{S_1}{L}\right)$	= NIL

DEDUCTION FOR SUPERSTRUCTURES.

see sketch

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	✓				
" overhang	✓				
R.Q.D. enclosed	✓				
" overhang	✓				
Bridge enclosed	10,000	10,000	2100	✓	10,000
" overhang aft	140	70	+20	✓	70
" overhang forward	✓				
F'cle enclosed	3,650	3,650	1800	$\frac{1770}{1830}$	3,530
" overhang	✓				
Trunk aft	✓				
" forward	✓				
*Tonnage opening aft	✓				
" " forward	✓				
Total	13,790	13,720			13,600

Standard Height of Superstructure	1830
" " R.Q.D.	
Deduction for complete superstructure	444
Percentage covered $\frac{S}{L} =$	39.40
" " $\frac{S_1}{L} =$	39.20
" " $\frac{E}{L} =$	38.86
Percentage from Table, Line A.	22.53
(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 =	444 x 22.53 = 100 mm.

SHEER CORRECTION.

Service trim 300⁴m
Sheer measured from line parallel to service waterline.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	546	1	546	400	400	1	400
$\frac{1}{4}L$ from A.P.	243	4	972	145	145	4	580
$\frac{2}{4}L$ "	61	2	122	11	11	2	22
Amidships	-	4	-	0	✓	4	-
$\frac{3}{4}L$ from F.P.	121	2	242	134	121	2	242
$\frac{1}{4}L$ "	485	4	1940	401	437	4	1948
F.P.	1091	1	1091	1091	1095	1	1095
Total			4913				4287

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{626(.75 - .197)}{18(.553)} = +19 \text{ mm.}$
If limited on account of midship superstructure. If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

	Ex. M.
Depth to Freeboard Deck =	3017
Summer freeboard =	1020
Moulded draught (d) =	1997

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4} \text{ inches} = 42 \text{ mm} = 4 \text{ cm.}$

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line
 $\Delta = 276 \text{ tons}$
Tons per Δ immersion at summer load water line
 $T = 1.77 \text{ ts/cm.}$
Deduction = $\frac{\Delta}{40 T} \text{ inches} = 4 \text{ cm.}$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient Nil.

	+	-	
Depth Correction	49	✓	
Deduction for superstructures	✓	100	
Sheer correction	19	✓	
Round of Beam correction	✓	✓	
Correction for Thickness of Deck amidships	20	✓	
Other corrections, scantlings, etc. complete	440		
Summer/ moulded draught of	828	100	+ 728
1.973 m (1.778 m Actual)			
Summer Freeboard =			1020

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

Tropical Fresh Water Line above Centre of Disc ...	8 cm	Tropical Fresh Water Freeboard	94
Fresh Water Line " " ...	4 cm	Fresh Water " " ...	98
Tropical Line " " ...	4 cm	Tropical " " ...	98
Winter Line below " " ...	NOT ASSIGNED	Winter " " ...	NOT ASSIGNED
Winter North Atlantic Line " " ...	NOT ASSIGNED	Winter North Atlantic " " ...	NOT ASSIGNED

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.

R.P. Shear

Standard.

546	1	546
243	3	729
61	3	183
		<u>1458</u>

Actual

400	1	400
145	3	435
11	3	33
		<u>868</u>

$$\frac{868}{1458} = .5953.$$

Forward Shear

Standard

1091	1	1091
485	3	1455
121	3	363
		<u>2909</u>

Actual

1091	1	1091
481	3	1443
134	3	402
		<u>2936</u>

$$\text{diff.} = 27.$$

$$\text{Allowable Excess} = \frac{9.53}{25} \times 27 = 10.3.$$

Standard

1091	485.	121	$\times 2919.3$
			<u>2909.</u>
Allowed	1095	487	121.

Trade of ship Service in the Indonesian archipelago

Names of sister ships Amsterdam { 1427 Boot: "BEKAKA" } Rotterdam { 1129 Jansen: "BELATIK"
26 Stapel: "BOGA" } { 271 Jonker, Staus: "BALAM"
151 Koopman: "BENDALU"

Builder's name and yard number Bodewes' Scheepswerven, Martenshoek, yard no 401

Owners Republik Indonesia

Fee 4165,-



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