

DJADJAT
49362
Rpt C.11 (Comp.).

24 FEB 1953

Index No. 43920
(For London Office only.)

Nº 35961

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name MENGKARA	Official Number ✓	Nationality and Port of Registry Indonesian Djakarta	Gross Tonnage 1131.64	Date of Build 1953	Port of Survey Rotterdam
Moulded Dimensions: Length 58.65 MTR Breadth 10.15 MTR Depth 4.40 MTR = 3.74 MTR Moulded displacement at moulded draught = 85 per cent. of moulded depth 1521.7 m³ tons Coefficient of fineness for use with Tables .683					Date of Survey Whilst building (1953)
					Surveyor's Signature <i>Kranjcar</i>
					Particulars of Classification +100 A1 for Indonesian coasting service

DEPTH FOR FREEBOARD (D). Moulded depth 4400 ✓ Stringer plate 6 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = 50 \times \frac{12.98}{58.65}$ Depth for Freeboard (D) = 4417 ✓	DEPTH CORRECTION. (a) Where D is greater than Table depth (D-Table depth) R = 8.33(4417-3910)14.811 = +63 mm ✓ (b) Where D is less than Table depth (if allowed) (Table depth-D) R = -507 ✓ If restricted by superstructures	ROUND OF BEAM CORRECTION. Moulded Breadth (B) 10150 ✓ Standard Round of Beam = $\frac{B \times R}{50} =$ 203 ✓ Ship's Round of Beam = 100 ✓ Difference -3 ✓ Restricted to Correction = $\frac{\text{Diff}^\circ}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{3}{4} \times 2528 = \text{Nil}$ ✓
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DEDUCTION FOR SUPERSTRUCTURES.					
	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	35400 ✓	35400 ✓	1300 ✓	—	35400 ✓
" overhang aft	200 ✓	150 ✓	"	—	150 ✓
" overhang forward	1280 ✓	640 ✓	"	—	640 ✓
F'cle enclosed	5155 ✓	5155 ✓	1300 ✓	—	5155 ✓
" overhang	3635 ✓	2480 ✓	"	—	2480 ✓
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	45670 ✓	43825 ✓			43825 ✓

Standard Height of Superstructure **1.83 M** ✓
" " R.Q.D. — ✓
Deduction for complete superstructure **643 mm** ✓
Percentage covered $\frac{S}{L} = 77.87$ ✓
" " $\frac{S_1}{L} =$ } **74.72** ✓
" " $\frac{E}{L} =$ }
Percentage from Table, Line A. **+B 6880** ✓
(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 = **643 x 6880 = -442 mm** ✓

SHEER CORRECTION.							
Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	743 ✓	1	743 ✓	482 ✓	482 ✓	1	482 ✓
$\frac{1}{8}L$ from A.P.	330 ✓	4	1320 ✓	184 ✓	184 ✓	4	736 ✓
$\frac{2}{8}L$ "	83 ✓	2	166 ✓	38 ✓	38 ✓	2	76 ✓
Amidships	0 ✓	4	0 ✓	0 ✓	0 ✓	4	0 ✓
$\frac{2}{8}L$ from F.P.	165 ✓	2	330 ✓	174 ✓	168 ✓	2	336 ✓
$\frac{1}{8}L$ "	660 ✓	4	2640 ✓	666 ✓	662 ✓	4	2648 ✓
F.P.	1485 ✓	1	1485 ✓	1515 ✓	1495 ✓	1	1495 ✓
Total			6684 ✓				5773 ✓

Mean actual sheer aft
Mean standard sheer aft = **DEFICIENT = $\frac{1148}{1982} = .5792$** ✓
Mean actual sheer forward
Mean standard sheer forward = **EXCESS** ✓
Length of enclosed superstructure forward of amidships = **7.1L** ✓
" " aft of amidships = **7.1L** ✓
" SHEERS AFT: STANDARD " ACTUAL
 $\frac{743}{330} \frac{743}{490} \frac{482}{184} \frac{482}{552}$
 $\frac{83}{38} \frac{249}{114} \frac{1982}{1148}$
Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{911}{18} (.75 - .3894) = +18 \text{ mm}$ ✓
If limited on account of midship superstructure. **.3606** ✓
If limited to maximum allowance of $\frac{1}{2}$ ins. per 100 ft.

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = 4406 ✓ Summer freeboard = 1200 ✓ Moulded draught (d) = 3206 ✓ Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{48} \text{ inches} = 67 \text{ mm} = 7 \text{ cm}$ ✓ Addition for Winter North Atlantic Freeboard (if required) = 67+51=118=12 cm	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta = 1267$ ✓ Tons per inch immersion at summer load water line $T = 1.85$ ✓ Deduction = $\frac{\Delta}{40 T} \text{ inches} = 65 \text{ mm} = 7 \text{ cm}$ ✓	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{.683+.68}{1.36} = \frac{1.363}{1.36}$ ✓ Depth Correction 63 ✓ Deduction for superstructures -442 ✓ Sheer correction 18 ✓ Round of Beam correction - ✓ Correction for Thickness of Deck amidships 11 ✓ Other corrections, scantlings, etc. 1016 ✓ SUMMER MOULDED DRAUGHT OF 3.201 M (3206 M ACTUAL) ✓ Summer Freeboard = 1200 ✓
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood Steel, Deck :-			
Tropical Fresh Water Line above Centre of Disc ...	14 cm ✓	Tropical Fresh Water Freeboard ...	106 mm ✓
Fresh Water Line " " ...	7 " ✓	Fresh Water " " ...	113 " ✓
Tropical Line " " ...	7.6 " ✓	Tropical " " ...	113 " ✓
Winter Line below " " ...	7.6 " ✓	Winter " " ...	127 " ✓
Winter North Atlantic Line " " ...	NOT APPLICABLE ✓	Winter North Atlantic " " ...	NOT APPLICABLE ✓

17.3.1953
5m T 11/41. M°C.
010509-010518-0335

Mengkara.

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.

At draught 2750 mm is displacement 1036,2 m³ (incl. shell plating)
 " " 3000 " " " 1154,4 m³ " "
 " " 3200 " " " 1276,0 m³ " "

At draught 3000 mm displacement per is 4,85 m³/cm.

FOCLE

$$L/10 = 5.865$$

PART I (FOR^D OF $L/10$)

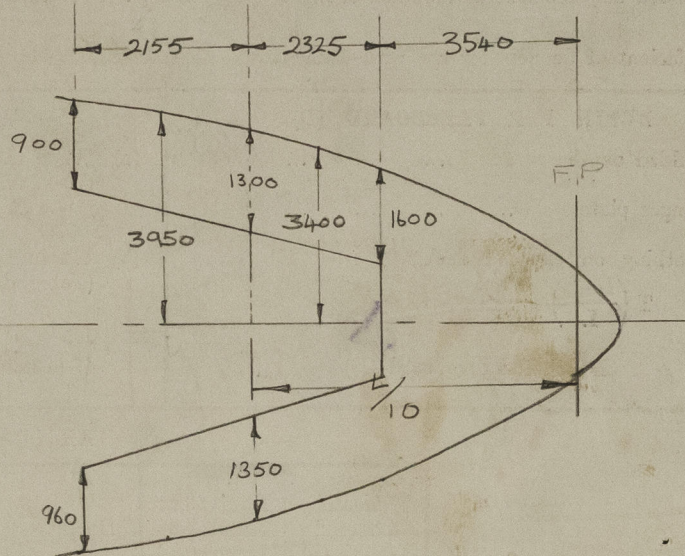
$$\begin{aligned} \text{EQUIV. LENGTH} &= 3540 + \frac{2325(1300+1600)}{6800} + \frac{2325(1350+1600)}{6800} \\ &= 3540 + \frac{2325 \times 2925}{6800} \\ &= 4540 = S = S' \end{aligned}$$

$$\text{OVERHANG} = 2325 - 1000 = 1325 = S = S'$$

PART II (AFT. OF $L/10$)

$$\begin{aligned} \text{EQUIV. LENGTH} &= \frac{2155}{7900} \left\{ \frac{(900+1300)}{2} + \frac{(960+1350)}{2} \right\} \\ &= \frac{2155 \times 2255}{7900} = 615 = S = S' \end{aligned}$$

$$\text{OVERHANG} = 2925 - 615 = 2310 = S \therefore S' = 1155$$



$$\text{TOTAL EQUIV. LENGTH} = 4540 + 615$$

$$= 5155$$

$$\text{OVERHANG} = 1325 + 2310$$

$$= 3635 = S$$

$$S' = 1325 + 1155$$

$$= 2480$$

SHEERS FORWARD.

SHEER FOR^D EXCESS.

SHEER AFT = 57.92

$$\frac{57.92 - 50}{75 - 50} = \frac{7.92}{25} = 31.68\%$$

ORDINATE	$\frac{1}{3}L$	$\frac{1}{2}L$	F.P.
STANDARD SHEER	165	660	1485
ACTUAL SHEER	174	666	1515
DIFF.	9	6	30
DIFF x 3168	3	2	10
STANDARD SHEER	165	660	1485
EFFECTIVE SHEER	168	662	1495

Trade of ship Indonesian coastal service

Names of sister ships ✓

Builder's name and yard number Gebr. Pot. Bolnes No 927

Owners Indonesian Government

Fee £ 253,-



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Foundation