

Rpt. C.11 (Comp.)

SPT RPT. No 2589/F

For LONDON OFFICE ONLY

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Index No.

Govt. Copy

Owners C11

# LLOYD'S REGISTER OF SHIPPING

## SURVEYS FOR FREEBOARD

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER)

Ship's Name <b>R.I. SORONG</b>	Official Number <b>911</b>	Nationality and Port of Registry <b>INDONESIAN</b>	Gross Tonnage <b>4156</b>	Date of Build <b>1965</b>	Port of Survey <b>SPLIT</b>
Moulded Dimensions: Length <b>103.960 M</b> Breadth <b>15.407 M</b> Depth <b>8.160 M</b>					Date of Survey <b>WHIST BUILDING</b>
Freeboard Length <b>103.960 M</b> To C.L. of ROOPEE POCK on 6.6 m W.L.					Surveyor's Signature <i>[Signature]</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>7549 m<sup>3</sup></b>					Particulars of Classification <b>100 A1</b>
Coefficient of fineness for use with Tables <b>686</b>					<b>CONTINGENT OIL TANKER</b>

<b>DEPTH FOR FREEBOARD (D).</b>	<b>DEPTH CORRECTION.</b>	<b>ROUND OF BEAM CORRECTION.</b>
Moulded depth ... <b>8.160</b>	(a) Where D is greater than Table depth (D - Table depth) R = <b>8.33 (8.174 - 6.864) 26 = +2847</b>	Moulded Breadth (B) <b>15.407</b>
Stringer plate ... <b>14 MM</b> ... <b>0.014</b>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <b>1.310</b>	Standard Round of Beam = $\frac{B}{50} = \frac{15.407}{50} = \mathbf{308}$
Wood Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <b>300 MM</b>
Depth for Freeboard (D) = <b>8.174</b>		Difference <b>8</b>
		Restricted to
		Correction = $\frac{\text{Diff}^\circ}{4} \times \left( 1 - \frac{S_1}{L} \right) = 2 \times 5.033 = \mathbf{+17}$

**DEDUCTION FOR SUPERSTRUCTURES.**

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height M	Height Correction	Effective Length (E)
Poop enclosed (Equiv) ...	27.121	27.121	2.400	-	27.121
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
F'cle enclosed ...	24.020	24.020	2.320	-	24.020
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	51.141	51.141			51.141

Standard Height of Superstructure	<b>2098.8</b>
" " R.Q.D.	
Deduction for complete superstructure	<b>961.7</b>
Percentage covered $\frac{S}{L} =$	
" " $\frac{S_1}{L} =$	<b>49.67</b>
" " $\frac{E}{L} =$	
Percentage from Table, Line A.	<b>TANKER 40.67</b>
(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 = $961.7 \times 40.67 =$	<b>-391</b>

**SHEER CORRECTION.**

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	1112	1	1112	678	678	1	678
1/4 L from A.P. ...	494	4	1976	284	284	4	1136
1/2 L ...	123	2	246	49	49	2	98
Amidships ...	0	4	0	0	0	4	0
3/4 L from F.P. ...	247	2	494	167	167	2	334
1/4 L ...	988	4	3952	657	657	4	2628
F.P. ...	2223	1	2223	1455	1455	1	1455
Total ...			10003				6329

Mean actual sheer aft =	DEFICIENT
Mean standard sheer aft =	
Mean actual sheer forward =	DEFICIENT
Mean standard sheer forward =	
Length of enclosed superstructure forward of amidships =	TANKER WITH DEFICIENT SHEERS
" " aft of " =	

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \left( \frac{3674}{18} - 55.1 \right) \times \left( .75 - \frac{2.484}{2} \right) = \mathbf{+75}$

If limited on account of midship superstructure. ✓

<b>Deduction for Tropical Freeboard.</b>	<b>Deduction for Fresh Water.</b>
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line
Depth to Freeboard Deck = <b>7.564</b>	$\Delta = \mathbf{7302}$
Summer freeboard = <b>.964</b>	K Tons per inch immersion at summer load water line
Moulded draught (d) = <b>6.600</b>	T = <b>13.16</b>
Keel allowance = <b>18</b>	Deduction = $\frac{\Delta}{40 T}$ inches
Extreme draught = <b>6.618</b>	= <b>139</b>
Deduction for Tropical freeboard and addition for = <b>137.57</b>	
Winter freeboard = $\frac{d}{4}$ inches = <b>138</b>	
Addition for Winter North Atlantic Freeboard (if required) = <b>137.5 + 85.7 = 223</b>	

<b>TABULAR FREEBOARD</b> corrected for Flush Deck (if required)	<b>1238</b>
Correction for coefficient $\frac{686 + 68}{1.36} = 1.00441$	<b>1243</b>
Depth Correction ...	<b>284</b>
Deduction for superstructures ...	<b>391</b>
Sheer correction ...	<b>75</b>
Round of Beam correction ...	<b>1</b>
Correction for Thickness of Deck amidships ...	<b>610</b>
Other corrections, scantlings, etc. TO CORRESPOND TO S.M. DRAUGHT OF 6.60 m	<b>362</b>
Summer Freeboard =	<b>964</b>

SUMMER FREEBOARD amidships from Centre of Disc to top of Line **964**

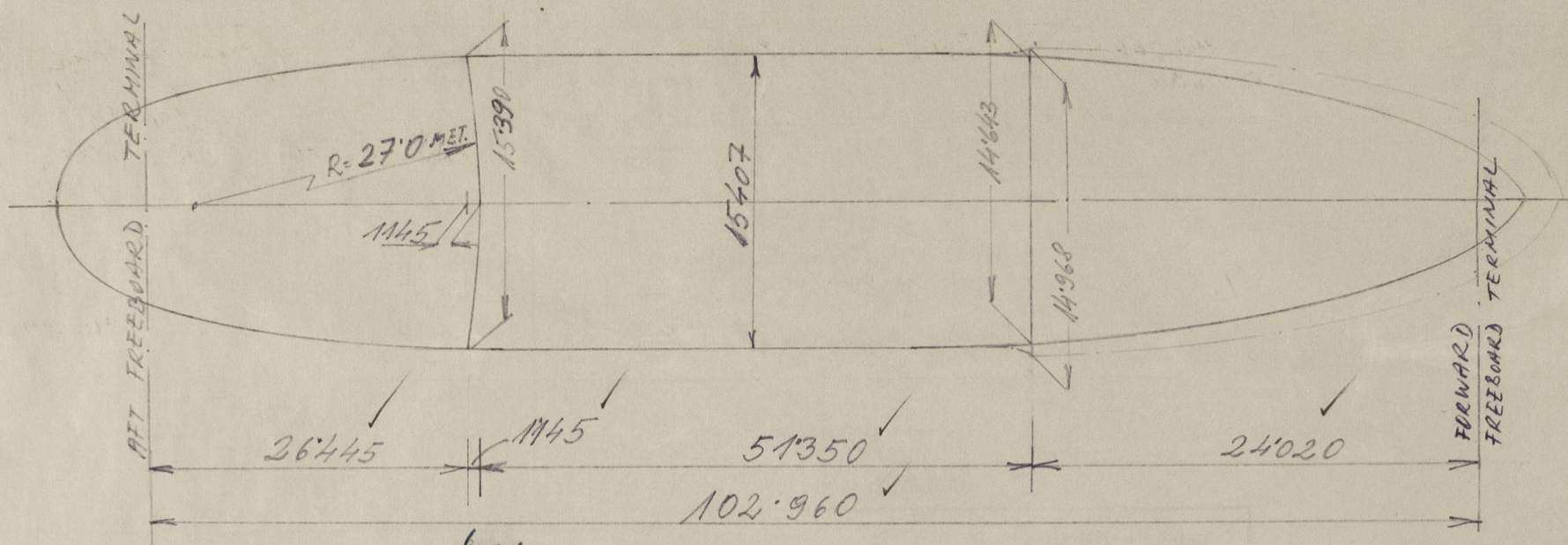
23 MAR 1965

Tropical Fresh Water Line above Centre of Disc	<b>277</b>
Fresh Water Line " "	<b>139</b>
Tropical Line " "	<b>138</b>
Winter Line below " "	<b>138</b>
Winter North Atlantic Line " "	<b>223</b>

Tropical Fresh Water Freeboard	<b>687</b>
Fresh Water " "	<b>825</b>
Tropical " "	<b>826</b>
Winter " "	<b>1102</b>
Winter North Atlantic " "	<b>1187</b>

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.

SHEER ALLOWANCE FOR EXCESS HEIGHT OF SUPERSTRUCTURES ABOVE STANDARD  
 POOP = (2460 - 2099) = 361 m  
 =  $\frac{1}{3} \times 361 \times \frac{27.521}{102.960} = 31.7 \text{ m}$   
 FORECASTLE = (2400 - 2099) = 301 m  
 =  $\frac{1}{3} \times 301 \times \frac{24.020}{102.960} = 23.4 \text{ m}$



RAKE OF POOP FRONT =  $\frac{600}{7200}$

RAKE IN  $\frac{1}{2}$  STANDARD HEIGHT OF SUPERSTRUCTURE

=  $\frac{600}{7200} \times 1.0494 = .087 \text{ m}$

$\therefore$  EQUIVALENT LENGTH OF POOP =  $26.445 + \left( \frac{2}{3} \times 1.145 \right) - .087 = 27.121 \text{ m}$

SHEERS AFT

STANDARD

1112	1	1112
617	3	1851
		2963

ACTUAL

678	1	678
333	3	999
		1677
		+(16 x 31.7)
		507
		2184

SHEERS FORWARD

STANDARD

2223	1	2223
1235	3	3705
		5928

ACTUAL

1455	1	1455
824	3	2472
		3927
		+(16 x 23.4)
		374
		4301

$\cdot 850 = 6.936 \text{ m}$

K. TONS/cm @ 6.936 m =

$14.22 + \left( \frac{36}{100} \times \frac{306}{5} \right) = 14.826$

EXT.  $\Delta$  IN K. TONS @ 6.936 m =

$7710 + (3.6 \times 14.373) = 7762$

Less FOR APPENDAGES

24

7738 K. TONS

= 7549 m<sup>3</sup>

DRAUGHT MOULDED [M]	DISPLACEMENT 1 T = 1000 KGS	METRIC TONS PER CM
7.10	7985	14.93
7.00	7845	14.22
6.90	7710	13.37
6.80	7583	13.28
6.70	7440	13.22
6.60	7302	13.16
WITH APPENDAGES FOR SEA WATER $\rho = 1.025 \text{ T/M}^3$		

Trade of ship

INTERNATIONAL, TANKER

Names of sister ships

NONE

Builder's name and yard number

BRODOGRADILISTE "Y. LOZOVINA-MOSOR", YARD No. 137

Owners

THE GOVERNMENT OF THE REPUBLIC OF INDONESIA

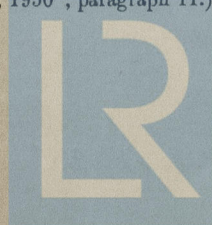
Fee £

WILL BE DETERMINED WHEN TONS GROSS OBTAINED.

List of plans forwarded for reference. (See "Instructions to Surveyors, Part 4, 1950", paragraph 11.)

MIDSHIP SECTION

LONGITUDINAL SECTION & DECKS



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