

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name PERMATA Official Number ✓ Nationality and Port of Registry INDONESIA Gross Tonnage 664.89 Date of Build 1953

Port of Survey GRONINGEN

Date of Survey July, 1953

Surveyor's Signature [Signature]

Particulars of Classification 100 A1 Contemplated.

Moulded Dimensions: Length 52.475 Breadth 9.700 Depth 2.950 m.

Moulded displacement at moulded draught = 85 per cent. of moulded depth 0.55 m<sup>3</sup>

Coefficient of fineness for use with Tables .68 (ACTUAL .668)

**DEPTH FOR FREEBOARD (D).**

Moulded depth ... .. 2.950

Stringer plate ... .. 6.7

Sheathing on exposed deck

$T \left( \frac{L-S}{L} \right) =$

see sketch

Depth for Freeboard (D) = 2.964

**DEPTH CORRECTION.**

(a) Where D is greater than Table depth (D-Table depth) R =

(b) Where D is less than Table depth (if allowed) (Table depth-D) R =

8.33 (3.499 - 2.964) 13.252 - 59

If restricted by superstructures Yes 56 m

SEE OVER

**ROUND OF BEAM CORRECTION.**

Moulded Breadth (B) 9.700

Standard Round of Beam =  $\frac{B \times 12}{50} = \frac{116.4}{50} = 2.328$

Ship's Round of Beam = 1.94

Difference +1.94

Restricted to

Correction =  $\frac{\text{Diff}^c}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{1.94}{4} \times 0.128 = +0.128$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ... ..	12815	12815	2200	—	12815
„ overhang ... ..	400	200	200	—	200
R.Q.D. enclosed ... ..					
„ overhang ... ..					
Bridge enclosed ... ..	22550	22550	2200	—	22550
„ overhang aft ... ..					
„ overhang forward ... ..					
F'cle enclosed ... ..	15460	15460	1250	1.25/1.83	10560
„ overhang ... ..					
Trunk aft ... ..					
„ forward ... ..		1/2 0.11 F			
Tonnage opening aft ... ..	1250	725	2200		725
„ „ forward ... ..					
Total ... ..	52475	51750			46850

Standard Height of Superstructure 1.83 m

„ „ R.Q.D. ✓

Deduction for complete superstructure 590 mm.

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

„ „  $\frac{S_1}{L} = 98.62$

„ „  $\frac{E}{L} = 89.28$

Percentage from Table, Line A. + B 86.80

(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 = 590 x .8680 = -512 mm.

## SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ... ..	691	1	691	593	1918	1	1918
1/4 L from A.P. ... ..	307	4	1228	222	854	4	3416
1/2 L „ ... ..	77	2	154	61	211	2	422
Amidships ... ..	✓	4	✓	0	✓	4	✓
3/4 L from F.P. ... ..	154	2	308	165	165	2	330
1/4 L „ ... ..	614	4	2456	635	635	4	2540
F.P. ... ..	1382	1	1382	1602	1602	1	1602
Total ... ..			6219				10228

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{4009}{18} (.75 - .50) = -56 \text{ mm.}$

If limited on account of midship superstructure. ✓

Actual To. Sk. Lt. = 2200

Standard „ „ „ = 1830

370

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 L

„ „ aft of „ = 7.1 L

## Deduction for Tropical Freeboard.

## Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 2.964

Summer freeboard = 50

Moulded draught (d) = 2.914

## Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{48} \text{ inches} = 61 \text{ mm} = 6 \text{ cm}$

Addition for Winter North Atlantic Freeboard (if required) = 61 + 51 = 112 mm = 11 cm.

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 1007 \text{ m}^3$

mm<sup>3</sup> per mm immersion at summer load water line

$T = 3.91$

Deduction =  $\frac{\Delta}{40 T} \text{ inches} = 6.44 \text{ cm.} = 6 \text{ cm.}$

## TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient NIL

Depth Correction ... ..

Deduction for superstructures ... ..

Sheer correction ... ..

Round of Beam correction ... ..

Correction for Thickness of Deck amidships ... ..

Other corrections, scantlings, etc. ... ..

+	-
56	
512	
56	
1	
1	624

Summer Freeboard = -151 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 cm
Fresh Water Line „ „ ...	6 cm
Tropical Line „ „ ...	0 cm
Winter Line below „ „ ...	6 cm
Winter North Atlantic Line „ „ ...	11 cm

Tropical Fresh Water Freeboard

Fresh Water

Tropical

Winter

Winter North Atlantic

5 cm (limited)

MINUS!

MINUS!

5 cm (limited)

11 cm

16 cm

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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.

$\text{Sheer @ poop front} = 132\text{m}$      $\text{Excess Tw. Sk. Ht.} = 370$      $\text{Total} = 502$   
 $\therefore \text{Virtual Sheer @ A.P.} = \frac{502 \times 26.238^2}{13.423^2}$     (for graph of Sheer see BIDURI)  
 $= 1918.$   
 $\text{Actual Sheer @ A.P.} = 593$   
 $\text{Excess Tween Sk. Ht.} = 370$   
 $\text{Ht. of Poop} = 1324$   
 $\underline{2287}$   
 $\therefore \text{Ht. } 1918.$

Depth Correction

$\text{Correction Factor} = \frac{26.5195 + 1250}{1830} \times 4.9655$   
 $\underline{31.485}$   
 $= \frac{26.5195 + 3.392}{31.485} = \frac{29.9115}{31.485} = .9503$   
 $\therefore \text{Actual Depth Correction} = 59 \times .9503$   
 $= \underline{56 \text{ mm.}}$

Trade of ship Ocean Trade

Names of sister ships "BIDURI", "BARLIAN"

Builder's name and yard number N.V. E.J. Smit & Zn, Westerbreek, yard no 727

Owners REPUBLIK INDONESIA

Fee f 190,-



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