

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	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build
BOSCHFONTEIN		Dutch		
<p> Moulded Dimensions: Length = 139.110 Breadth = 18.059 Depth = 11.734 Freeboard Length (SAY) 135.000 m (13550 + .85 x 135 x 18.059 x 1.941) Moulded displacement at moulded draught = 85 per cent. of moulded depth (13550 + 4024) = 17574 tons w³ Coefficient of fineness for use with Tables .723 ✓ </p>				

Port of Survey _____
Date of Survey 7 September 56
Surveyor's Signature _____
Particulars of Classification +100 A1...
contemplated

DEPTH FOR FREEBOARD (D).		DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth	... .. 11 734	(a) Where D is greater than Table depth (D-Table depth) R =	Moulded Breadth (B) 18.059
Stringer plate	... 11 14	8.33 (11745 - 9.000) 30 = + 686	Standard Round of Beam = $\frac{B \times 12}{50} = 361$
Wood Sheathing on exposed deck		(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Ship's Round of Beam = 25
T $\left(\frac{L-S}{L} \right) =$			Difference 336
Depth for Freeboard (D) =	11745	If restricted by superstructures	Restricted to 3106
	11745		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{336}{4} (1 - .4958) = +43$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	7.983	7.983	2290		7.983
„ overhang	1.347	0.673			0.673
R.Q.D. enclosed					
„ overhang					
Bridge enclosed	40.626	40.626	2290		40.626
„ overhang aft					
„ overhang forward	374	187			187
F'cle enclosed	16 600	16 600	2290		16 600
„ overhang					
Trunk aft					
„ forward					
Tonnage opening aft					
„ „ forward					
Total	66930	66069			66069

Standard Height of Superstructure 2290

" " R.Q.D. _____

Deduction for complete superstructure 1067 ✓

Percentage covered $\frac{S}{L} = 49.58$

" " $\frac{S_1}{L} = 48.94$

" " $\frac{E}{L} = 48.94$

Percentage from Table, Line A.
(corrected for absence of forecastle (if required))

Percentage from Table, Line B. 35.10
(corrected for absence of forecastle (if required))

Interpolation for bridge less than $\cdot 2L$ (if required)

Deduction = $1067 \times .3510 = -375$ W.W.

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	1379	1	1379	1372	1372	1	1372
$\frac{1}{2}$ L from A.P. ...	613	4	2452	719	719	4	2976
$\frac{3}{8}$ L " ...	153	2	306	66	66	2	132
Amidships ...	0	4	0	0	0	4	0
$\frac{3}{8}$ L from F.P. ...	306	2	612	668	668	2	1336
$\frac{1}{2}$ L " ...	1225	4	4900	1890	1890	4	7560
F.P. ...	2758	1	2758	3113	3113	1	3113
Total ...			12407				16389

$$\frac{\text{Mean actual sheer aft}}{\text{Mean standard sheer aft}} = 1.1$$

$$\frac{\text{Mean actual sheer forward}}{\text{Mean standard sheer forward}} = 1.1$$

$$\frac{\text{Length of enclosed superstructure}}{L} \text{ forward of amidships} = 0.1$$

$$\text{aft of } = 0.1$$

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{3982}{18} (.75 - .247) = -111$ If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100ft.

Deduction for Tropical Freeboard.
Addition for Winter and Winter North Atlantic
Freeboard.

Deduction for Fresh Water.

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

Correction for coefficient

	Ft.
Depth to Freeboard Deck	= 11745
Summer freeboard	= 3192
Moulded draught (d)	= 8553
Keel allowance	=
Extreme draught	=
Deduction for Tropical free-board and addition for =	

Displacement in salt water at
summer load water line
 $\Delta =$
Tons per inch immersion at
summer load water line
 $T =$
Deduction $= \frac{\Delta}{40 T}$ inches

Depth Correction	...	...	...	...
Deduction for superstructures	...	...	...	...
Sheer correction	...	...	...	...
Round of Beam correction	...	...	...	...
Correction for Thickness of Deck amidships	...	...	...	...
Other corrections, scantlings, etc.	...	...	...	...

+	-
686 ✓	375
43	111
726	
1455	486

+ 969

Summer Freeboard = 3192

Addition for Winter North Atlantic Freeboard (if required)=

Seating draught
 $= 29' - 0\frac{3}{4}" = 8.553 \text{ m}$

Summer Freeboard = 3192

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

Tropical Fresh Water Line above Centre of Disc	...	...	Tropical Fresh Water Freeboard	...	...
Fresh Water Line	"	"	Fresh Water	"	...
Tropical Line	"	"	Tropical	"	...
Winter Line	below	"	Winter	"	...
Winter North Atlantic Line	"	"	Winter North Atlantic	"	...

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.

$$\begin{aligned} \text{CHANGE IN CR} &= \left[.85 - .85 \left(\frac{9.499}{11.734} \right) \right] .162 \\ &= \left[.85 - .684 \right] .162 \\ &= .166 \times .162 \\ &= .0269 = .03 \cdot 027 \end{aligned}$$

$$\therefore CR = .695 + .027 = .722$$

Use .723

BRIDGE

$$\begin{aligned} \text{Length at side} &= (97-47) 820 = 41000 \\ - \frac{820 \times 27}{59.25} &= 374 \\ \hline &40626 \\ \text{OH} &= 374 \end{aligned}$$

POOP

$$\begin{aligned} \text{Length at side} &= 10200 \\ - \frac{2460 \times 26}{47.5} &= 1.347 \\ \hline &7.983 \\ - \frac{1640 \times 26}{49} &= .870 \\ \hline &2.217 \\ \text{OH} &= 1.347 \end{aligned}$$

$$\begin{array}{r} 820 \\ \times 50 \\ \hline 41000 \\ 610000 \\ \hline 102000 \end{array}$$

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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Foundation