

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

7431

Ship's Name "TULIPOALE" Ex. "LINGAY"	Official Number 182416	Nationality and Port of Registry BRITISH. LIVERPOOL.	Gross Tonnage 459 451.90	Date of Build JAN. 1945.	Port of Survey Birkenhead.
Moulded Dimensions: Length 151.50' Breadth 24.5' Depth 15'					Date of Survey APRIL - NOV. 1948.
Moulded displacement at moulded draught = 85 per cent. of moulded depth 934 tons					Surveyor's Signature Lockhart.
Coefficient of fineness for use with Tables .68 (Actual less than .68)					Particulars of Classification + 4 A.1. "Petroleum Storage Vessel" For Service in and between ports in the British Isles

DEPTH FOR FREEBOARD (D).		DEPTH CORRECTION.		ROUND OF BEAM CORRECTION.	
Moulded depth ...	15.00	(a) Where D is greater than Table depth (D - Table depth) R = (15.03 - 10.10) 1.165 = + 5.74"		Moulded Breadth (B)	24.5
Stringer plate03	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = 4.93		Standard Round of Beam = $\frac{B \times 12}{50}$	6.60"
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$		If restricted by superstructures		Ship's Round of Beam	7"
Depth for Freeboard (D) = 15.03				Difference	EXCESS .40"
				Restricted to	
				Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right)$	= $\frac{.40^2}{4} \times .8504 = -.09"$

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 ...				
" overhang aft ...				
" overhang forward ...				
Fore enclosed ...	22'-8"	6'-6"	✓	22.67
" overhang67			
Trunk aft ...				
" forward ...				
Tonnage opening aft ...				
" " forward ...				
Total ...	22.67	22.67	✓	22.67

Standard Height of Superstructure	6.00
" " R.Q.D.	✓
Deduction for complete superstructure	21.15
Percentage covered $\frac{S}{L} =$	14.96
" " $\frac{S_1}{L} =$	14.96
" " $\frac{E}{L} =$	14.96
Percentage from Table, Line A.	7.48
(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 = $21.15 \times .0748$	= - 1.58"

Vessel designed with trim by stern = 6.00'

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	25.15	✓ 1		25.15	67"	31.00	1		31.00
$\frac{1}{8}L$ from A.P. ...	11.19	✓ 4		44.76	40"	16.00	4		64.00
$\frac{3}{8}L$ " ...	2.765	✓ 2		5.53	14"	5.00	2		10.00
Amidships ...	-	4		-	0	-	4		-
$\frac{5}{8}L$ from F.P. ...	5.53	✓ 2		11.06	- 4"	8.00	2		16.00
$\frac{7}{8}L$ " ...	22.39	✓ 4		89.56	3"	27.00	4		54.00
F.P. ...	50.30	✓ 1		50.30	19"	55.00	1		110.00
Total ...				226.36	✓				285.00

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{58.64}{18} \left(.75 - \frac{.0748}{2} \right) = - 2.20"$

If limited on account of midship superstructure. **Yes. Nil.**

Mean actual sheer aft = **EXCESS.**

Mean standard sheer aft = **EXCESS.**

Mean actual sheer forward = **EXCESS.**

Mean standard sheer forward = **EXCESS.**

Length of enclosed superstructure forward of amidships = **Nil.**

" " aft of " = **Nil.**

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)	15.71
Addition for Winter and Winter North Atlantic Freeboard.		Correction for coefficient	15.71
Depth to Freeboard Deck = 15.03	Displacement in salt water at summer load water line SEE OVERLEAF. 1007	Depth Correction	5.74
Summer freeboard = 1.65	Tons per inch immersion at summer load water line SEE OVERLEAF. 8.77	Deduction for superstructures	- 1.58
Moulded draught (d) = 13.38	Deduction = $\frac{\Delta}{40 T}$ inches	Sheer correction	- .09
Deduction for Tropical freeboard and addition for	= 2.87	Round of Beam correction	-
Winter freeboard = $\frac{d}{4}$ inches = 3.34 = 3 $\frac{1}{4}$"	= 2 $\frac{3}{4}$"	Correction for Thickness of Deck amidships	-
Addition for Winter North Atlantic Freeboard (if required) =		Other corrections, scantlings, etc.	-
			5.74
			1.67
			+ 4.07
			Summer Freeboard = 19.78"

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	1' - 7 $\frac{3}{4}$"
Fresh Water Line	...	Fresh Water	1' - 5"
Tropical Line	...	Tropical	1' - 11"
Winter Line below	...	Winter	1' - 11"
Winter North Atlantic Line	...	Winter North Atlantic	1' - 11"

Tulipdale

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.

M.L.D. DRAFT.	M.L.D. T.P.I.	M.L.D. Δ.
10'-0"	8	670 Tons
11'-0"	8.25	762 "
12'-0"	8.47	861 "

N.B. All hydrostatic calculations available are based on moulded dimensions and a service trim of 6'-0" by the stern.

draught - 13.38 ~ 13'-4½"

	T.P.I.
11 - 0	8.25
12 - 0	8.47
13 - 3½	8.47
	$-.22 \times \frac{16.5}{12} = .30$
	<u>8.77</u>

$$\Delta \text{ mld.} = 861 + 165 \left(\frac{8.47 + 8.77}{2} \right)$$

$$= 861 + 142 = 1003 \text{ tons SW.}$$

$$\Delta \text{ full} = \frac{1003}{.996} = 1007 \text{ tons}$$

Trade of ship *carrying petroleum sludge in and between ports in the British Isles.*

Names of sister ships *✓*

Builder's name and yard number *Bochane & Sons Ltd. No 1290.*

Owners *British Wheel Process Co. Ltd.*

Fee £ *10 . 0 . 0*

[Signature]



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