

13 JUN 1935

Index. No. 34722
(For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

GLASGOW REPORT No. 55848

Computation of Freeboard for **MOTOR TANKER**
~~Steamer, Sailing Ship, Tanker~~
having **A POOP, BRIDGE + FORECASTLE**

(Type of Superstructures.)

Ship's Name
J. BROWN & CO LTD N^o 544

Nationality and Port of Registry
BRITISH

Official Number
✓

Gross Tonnage
✓

Date of Build
1936

Port of Survey **GLASGOW**

Date of Survey **12TH JUNE 1935**

Name of Surveyor **H. Thomas**

Particulars of Classification **+ 100 A1**
CARRYING PET. IN BULK.

Moulded Dimensions: Length **445.0** Breadth **61.0** Depth **32.2**

Moulded displacement at moulded draught = 85 per cent. of moulded depth

Coefficient of fineness for use with Tables **.749**

Depth for Freeboard (D)
Moulded depth ... 32.17
Upper plate06
Nothing on exposed deck
T $\frac{(L-S)}{L}$ =
Depth for Freeboard (D) = **32.23**

Depth correction
(a) Where D is greater than Table depth 2.56
(D - Table depth) R = $(32.23 - 29.67) 3.00$
= **+ 7.68"**
(b) Where D is less than Table depth (if allowed)
(Table depth - D) R =
If restricted by superstructures ✓

Round of Beam correction
Moulded Breadth (B) **61.00**
Standard Round of Beam = $\frac{B \times 12}{50}$ = **14.64**
Ship's Round of Beam = **15.5**
Difference **Excess .86**
Restricted to
Correction = $\frac{\text{Diff}^o}{4} \times (1 - \frac{S_1}{L})$ = $\frac{.86}{4} \times .6232$ = **.13"**

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	104.0	104.00	7.9	✓	104.00
" overhang ...	none				
R.Q.D. enclosed ...					
" overhang ...	32.67				
Bridge enclosed ...	30.0	32.67	7.9	✓	32.67
" overhang aft ...	none				
" overhang forward ...	none				
Deck enclosed ...	31.0	31.00	7.9	✓	31.00
" overhang ...	none				
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...	167.67	167.67			167.67

Standard Height of Superstructure **7.50**
" " R.Q.D. ✓
Deduction for complete superstructure **42.00"**
Percentage covered $\frac{S}{L} = 37.68\%$
" " $\frac{S_1}{L} = 37.68\%$
" " $\frac{E}{L} = 37.68\%$
Percentage from Table, **Line A. Tanker.** **28.68%**
(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 = **42.00 x .2868 = - 12.05"**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
P. ...	54.50	1		54.50	55.5	53.50	1		55.50
from A.P. ...	24.25	4		97.00	24.66	24.66	4		98.64
" ...	5.995	2		11.99	6.17	6.17	2		12.34
amidships ...	✓	4		✓	-	✓	4		✓
from F.P. ...	11.99	2		23.98	12.34	12.34	2		24.68
" ...	48.50	4		194.00	49.32	49.32	4		197.28
P. ...	109.00	1		109.00	111.0	111.00	1		111.00
Total ...	490.50			490.47					499.54

Mean actual sheer aft = **Excess**
Mean standard sheer aft
Mean actual sheer forward = **Excess**
Mean standard sheer forward
Length of enclosed superstructure forward of amidships =
" " aft of " = } **Tanker**
Correction = $\frac{\text{Difference between sums of products}}{18} (\frac{.75 - S}{2L}) = \frac{8.77}{18} (\frac{.75 - .1884}{.5616}) = - .28"$
If limited on account of midship superstructure.
If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Deduction for Tropical Freeboard.
Addition for Winter and Winter North Atlantic Freeboard.
Depth to Freeboard Deck = **32.23**
Summer freeboard = **6.06**
Moulded draught (d) = **26.17**
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = $6.54 = 6\frac{1}{2}$
Addition for Winter North Atlantic Freeboard (if required) = $6\frac{1}{2} + 4\frac{1}{2} = 11"$

Deduction for Fresh Water.
Displacement in salt water at summer load water line
 $\Delta =$
Tons per inch immersion at summer load water line
T =
Deduction = $\frac{\Delta}{40T}$ inches = $\frac{6\frac{1}{2}}{40 \times 11} = 6\frac{1}{2}"$

TABULAR FREEBOARD corrected for Flush Deck (if required)
Correction for coefficient $\frac{749 + 68}{1.36} = \frac{1429}{1.36}$

	+	-
Depth Correction ...	7.68	-
Deduction for superstructures ...	-	12.05
Sheer correction ...	-	.28
Round of Beam correction ...	-	.13
Correction for Thickness of Deck amidships ...	-	-
Other corrections, scantlings, etc. ...	-	-
	7.68	12.46

Summer Freeboard = **72.77**

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

Tropical Fresh Water Line above Centre of Disc ...	13"
Fresh Water Line " " ...	6 1/2"
Tropical Line " " ...	6 1/2"
Winter Line below " " ...	6 1/2"
Winter North Atlantic Line " " ...	11"

Tropical Fresh Water Freeboard ...	6' - 0 3/4"
Fresh Water " " ...	4' - 11 3/4"
Tropical " " ...	5' - 6 1/4"
Winter " " ...	5' - 6 1/4"
Winter North Atlantic " " ...	6' - 7 1/4"
	6' - 11 3/4"

(OVER)

Forecastle bulkhead closed with hook-bolted plate covers
 Bridge front - - - w. t. doors.
 - after - - - hook-bolted plate covers
 Poop front - - - w. t. doors.

Plans of midships section, profile & decks (2 plans) forwarded for reference

Please forward copy of computation for information of this office.

Owners:- Anglo-American Oil Company.

The Builders would return the favour of an early reply.

