

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name **BRITISH STRENGTH** Official Number **182859** Nationality and Port of Registry **BRITISH LONDON** Gross Tonnage **APPROX 8600 8579.70** Date of Build **1948**

Port of Survey **Belfast.**

Date of Survey **During construction.**

Surveyor's Signature *J. Miller*

Particulars of Classification **100 A1.**  
**"CARRYING PETROLEUM IN BULK"**  
**(Class contemplated).**

Moulded Dimensions: Length **464.0'** Breadth **61.5'** Depth **34.0'**  
(To CR of RUDDER STOCK)

Moulded displacement at moulded draught = 85 per cent. of moulded depth **18,345** tons

Coefficient of fineness for use with Tables **779**

DEPTH FOR FREEBOARD (D).		DEPTH CORRECTION.		ROUND OF BEAM CORRECTION.	
Moulded depth	34.0'	(a) Where D is greater than Table depth (D-Table depth) R = <b>(34.06 - 30.93) 3 = +9.39"</b>		Moulded Breadth (B)	61.5'
Stringer plate	.72" .06	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Standard Round of Beam = $\frac{B \times 12}{50}$	$\frac{61.5 \times 12}{50} = 14.76"$
Sheathing on exposed deck				Ship's Round of Beam	14.74" = 14.75"
$T \left( \frac{L-S}{L} \right) =$				Difference	- .01
Depth for Freeboard (D) =	34.06	If restricted by superstructures		Restricted to	
				Correction = $\frac{\text{Diff}^e}{4} \times \left( 1 - \frac{S_1}{L} \right)$	$\frac{.01}{4} \times .5839 = \text{Nil.}$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)	
Poop enclosed <i>Equival.</i>	97.83	97.83	8.0'	✓	97.83	Standard Height of Superstructure <b>7.50</b>
" overhang	1.17	0.59			0.59	R.Q.D. <b>✓</b>
R.Q.D. enclosed						Deduction for complete superstructure <b>42.00</b>
" overhang						Percentage covered $\frac{S}{L} = 41.61$ ✓
Bridge enclosed <i>Equival.</i>	42.50	42.50	8.0'	✓	42.50	$\frac{S_1}{L} =$
" overhang aft	3.50	2.63			2.63	$\frac{E}{L} =$ } <b>41.24</b> ✓
" overhang forward	.50	.25			.25	Percentage from Table, Line A. <i>Tanker</i> <b>32.24</b> ✓
F'cle enclosed <i>Equival.</i>	47.54	47.54	8.0'	✓	47.54	(corrected for absence of forecastle (if required))
" overhang						Percentage from Table, Line B.
Trunk aft						(corrected for absence of forecastle (if required))
" forward						Interpolation for bridge less than .2L (if required) ✓
Tonnage opening aft						Deduction = <b>42.00 × 32.24 = 13.54</b> ✓
" " forward						
Total	193.04	191.34			191.34	

## SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	56.40	1	56.40	57"	56.40	1	56.40
$\frac{1}{8}$ L from A.P.	25.10	4	100.40	25.12"	25.10	4	100.40
$\frac{3}{8}$ L	6.20	2	12.40	6.12"	6.20	2	12.40
Amidships	—	4	—	0	—	4	—
$\frac{3}{8}$ L from F.P.	12.40	2	24.80	9.3"	9.30	2	18.60
$\frac{1}{8}$ L	50.20	4	200.80	48.4"	48.40	4	193.60
F.P.	112.80	1	112.80	113.6"	113.60	1	113.60
Total			507.60				495.00

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{12.60}{18} \left( .75 - \frac{2080}{2 \times 464} \right) = +.38"$

If limited on account of midship superstructure.

Mean actual sheer aft = *Excess.*

Mean standard sheer aft =

Mean actual sheer forward = *Deficient*

Mean standard sheer forward =

Length of enclosed superstructure forward of amidships =

" " aft of " = } *Tanker.*

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)
<p>Depth to Freeboard Deck = <b>34.06</b></p> <p>Summer freeboard = <b>6.73</b></p> <p>Moulded draught (d) = <b>27.33</b></p> <p>Deduction for Tropical freeboard and addition for Winter freeboard = <math>\frac{d}{4}</math> inches = <b>6.83" = 6<math>\frac{3}{4}</math>"</b></p> <p>Addition for Winter North Atlantic Freeboard (if required) = <b>6.83 + 4.64 = 11.47" = 11<math>\frac{1}{2}</math>"</b></p>	<p>Displacement in salt water at summer load water line <math>\Delta =</math> <b>17296</b></p> <p>Tons per inch immersion at summer load water line <math>T =</math> <b>58.67</b></p> <p>Deduction = <math>\frac{\Delta}{40 T}</math> inches = <b>7.37" = 7<math>\frac{1}{4}</math>"</b></p> <p>EXT <math>\Delta</math> T.P.I.</p> <p>28' 17757 58.88</p> <p>27' 17052 58.55</p>	<p>Correction for coefficient <math>\frac{.779 + .68}{1.36} = \frac{1.459}{1.36}</math></p> <p>Depth Correction ... <b>9.39</b></p> <p>Deduction for superstructures ... <b>13.54</b></p> <p>Sheer correction ... <b>38</b></p> <p>Round of Beam correction ...</p> <p>Correction for Thickness of Deck amidships ...</p> <p>Other corrections, scantlings, etc. ...</p> <p>78.70 ✓</p> <p>84.43 ✓</p> <p>9.77 13.54 - 3.77</p> <p>Summer Freeboard = <b>80.66</b></p>

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

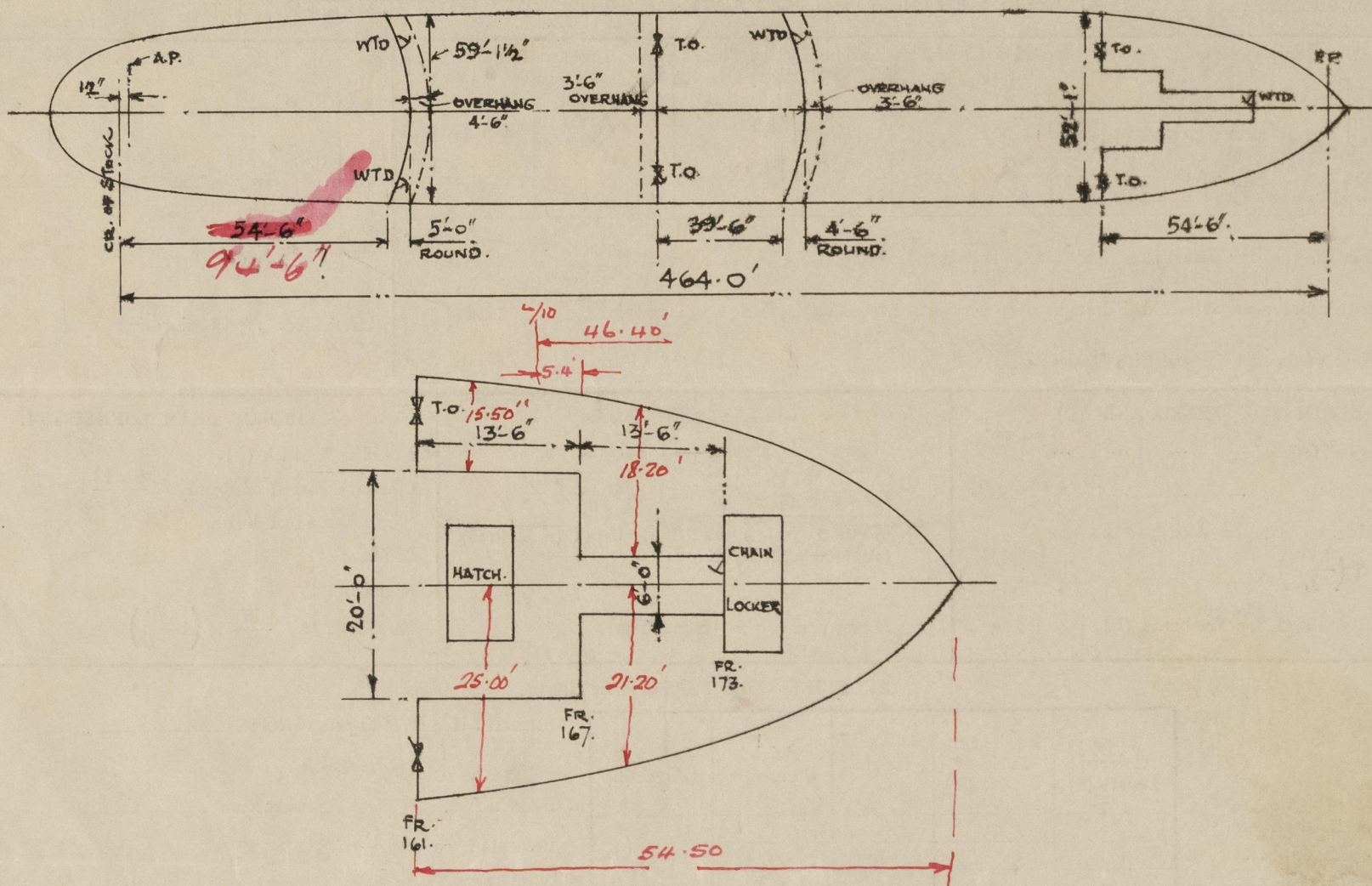
Tropical Fresh Water Line above Centre of Disc	14"
Fresh Water Line	7 $\frac{1}{4}$ "
Tropical Line	6 $\frac{3}{4}$ "
Winter Line below	6 $\frac{3}{4}$ "
Winter North Atlantic Line	11 $\frac{1}{2}$ "

Tropical Fresh Water Freeboard	6 $\frac{3}{4}$ "
Fresh Water	5 $\frac{1}{4}$ "
Tropical	6 $\frac{3}{4}$ "
Winter	7 $\frac{1}{2}$ "
Winter North Atlantic	7 $\frac{1}{2}$ "



# British Strength.

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.



Openings:- Forecastle bulkhead:- Tonnage openings (1p.+1s.) 4'-1" x 3'-1" clear, with 19" sills, portable steel plates, secured by wide spaced hook bolts. ✓  
 a watertight steel hinged door 4'-3" x 2'-3", with 18" sill, secured by toggles and operated from both sides. ✓  
 Bridge front bulkhead:- One watertight steel hinged door 5'-0" x 3'-0", with 18" sill, secured by toggles and operated from both sides. ✓  
 Bridge end bulkhead:- Tonnage openings (1p.+1s.), 4'-1" x 3'-1" clear, with 18" sills, portable steel plates, secured by wide spaced hook bolts. ✓  
 Poop front bulkhead:- Watertight steel hinged doors (1p.+1s.), with 18" sills, secured by toggles and operated from both sides. ✓

Roof:- 94.50'  
 $\frac{2}{3} \times 50 = 3.33'$   
 97.83' equivalent included length.  
 Overhang = 4.50 - 3.33 = 1.17'

Bridge:- 39.50'  
 $\frac{2}{3} \times 4.60 = 3.00$   
 42.50' equivalent included length.  
 Overhang = 3.50 - 3.00 = 0.50'

Forecastle:- S. S.  
 Enclosed:- 27.60 27.50  
 $\frac{13.50 \times 18.20}{20.80} = 11.81 11.81$   
 $\frac{5.40 \times 13.80}{23.20} = 3.21 3.21$  no overhang.  
 $\frac{8.1 \times 15.50}{25.0} = \frac{5.02}{47.54'} \frac{5.02}{47.54'}$

Trade of ship

Ocean going tanker.

Names of sister ships

"British Security" (yard no 1364).

Builder's name and yard number

Harland & Wolff Ltd Belfast. Yard no 1365.

Owners

Messrs. The British Tanker Company Ltd.

Fee £

11.00



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Foundation