

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name **BRITISH VIRTUE** Official Number **180567** Nationality and Port of Registry **British London** Gross Tonnage **8553** Date of Build **1945**

Port of Survey **Newcastle on Tyne**

Date of Survey **During Construction**

Surveyor's Signature **Ch. Dean for self & J. H. H. H.**

Particulars of Classification **+100A.1. Carrying Petroleum in bulk.**

Moulded Dimensions: Length **462-10 3/4** Breadth **61-9** Depth **34-0 1/2**

Moulded displacement at moulded draught = 85 per cent. of moulded depth **18,198** tons

Coefficient of fineness for use with Tables **.770**

**Depth for Freeboard (D).** **.04**

Moulded depth ... **34-0 1/2**

Stringer plate ... **.06**

Sheathing on exposed deck  $T \left( \frac{L-S}{L} \right) =$

Depth for Freeboard (D) = **34.10**

**Depth correction.**

(a) Where D is greater than Table depth  
(D - Table depth) R =  $(34.10 - 30.86) 3 = +9.72$

(b) Where D is less than Table depth (if allowed)  
(Table depth - D) R =  $3.24$

If restricted by superstructures

**Round of Beam correction.**

Moulded Breadth (B) **61-9"**

Standard Round of Beam =  $\frac{B \times 12}{50} = 14.82$

Ship's Round of Beam = **15.5"**

Difference **Excess .68**

Restricted to

Correction =  $\frac{\text{Diff}^2}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.68^2}{4} \times \left( 1 - \frac{.5819}{.5846} \right) = -.10$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed <b>en sketch</b>	<b>98.56</b>	<b>98.56</b>	<b>8-7 1/2</b>	<b>✓</b>	<b>98.56</b>
" overhang ...	<b>5.58</b>	<b>2.79</b>	<b>8-1 1/2</b>	<b>✓</b>	<b>2.79</b>
R.Q.D. enclosed	<b>3.02</b>	<b>1.51</b>			<b>1.51</b>
" overhang	<b>43.05</b>	<b>43.05</b>	<b>8-0</b>	<b>✓</b>	<b>43.05</b>
Bridge enclosed <b>EQUIN</b>	<b>40.91</b>	<b>2.62</b>			<b>2.62</b>
" overhang aft	<b>3-6</b>	<b>.53</b>			<b>.53</b>
" overhang forward	<b>3-6</b>	<b>.53</b>			<b>.53</b>
F'cle enclosed <b>EQUIN</b>	<b>47.30</b>	<b>47.30</b>	<b>8-0</b>	<b>✓</b>	<b>47.30</b>
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total	<b>196.50</b>	<b>193.57</b>			<b>193.57</b>

Standard Height of Superstructure **7.5'**

" " R.Q.D. **✓**

Deduction for complete superstructure **42"**

Percentage covered  $\frac{S}{L} = 42.45$

" "  $\frac{S_1}{L} = 41.54.81$

" "  $\frac{E}{L} = 41.54.81$

Percentage from Table, Line A. **TANKER. 32.54**

(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) **Tanker**

Deduction =  $42 \times .3254 = -13.67.78$

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	56.29	1	56.29	43.00	43.00	1	43.00	43.00	
$\frac{1}{2}$ L from A.P. ...	25.05	4	100.20	21.87	21.87	4	87.48	87.48	
$\frac{3}{4}$ L " ...	6.19	2	12.38	6.00	6.00	2	12.00	12.00	
Amidships ...	-	4	-	-	-	4	-	-	
$\frac{3}{4}$ L from F.P. ...	12.38	2	24.76	12.25	12.25	2	24.50	24.50	
$\frac{1}{2}$ L " ...	50.10	4	200.40	50.12	50.12	4	200.48	200.48	
F.P. ...	112.58	1	112.58	113.00	113.00	1	113.00	113.00	
Total ...			506.61				480.46		

Mean actual sheer aft = **DEFICIENT. > 75% STANDARD.**

Mean standard sheer aft

Mean actual sheer forward = **EXCESS.**

Mean standard sheer forward

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

" " aft of " = **TANKER.**

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{26.15}{18} \left( .75 - \frac{.2122}{.5378} \right) = +.78$

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 = **34.10**

Summer freeboard = **6.69**

Moulded draught (d) = **27.41**

Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = **6.85 = 6 3/4**

Addition for Winter North Atlantic Freeboard (if required) = **6.85 + 4.63 = 11.48 = 11 1/2**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 17239$

Tons per inch immersion at summer load water line

$T = 58.11$

Deduction =  $\frac{\Delta}{40T}$  inches

= **7.42 = 7 1/2**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient  $\frac{.770 + .68}{1.36} = \frac{1.45}{1.36}$

	+	-
Depth Correction	<b>9.72</b>	<b>.78</b>
Deduction for superstructures	<b>-</b>	<b>13.67</b>
Sheer correction	<b>.78</b>	<b>-</b>
Round of Beam correction	<b>-</b>	<b>.10</b>
Correction for Thickness of Deck amidships	<b>-</b>	<b>-</b>
Other corrections, scantlings, etc.	<b>-</b>	<b>.88</b>
	<b>10.50</b>	<b>13.77</b>

Summer Freeboard = **80.33.22**

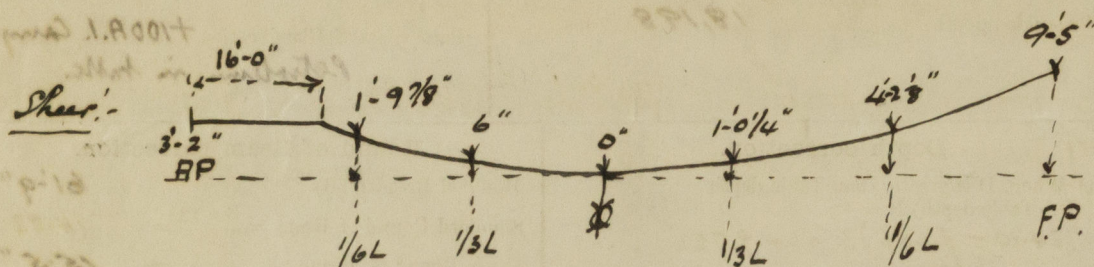
SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, **wood**, Steel, Deck: -

Tropical Fresh Water Line above Centre of Disc	<b>14 1/4"</b>
Fresh Water Line	<b>7 1/2"</b>
Tropical Line	<b>6 3/4"</b>
Winter Line below	<b>6 3/4"</b>
Winter North Atlantic Line	<b>11 1/2"</b>

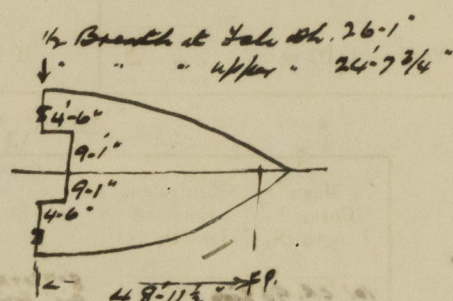
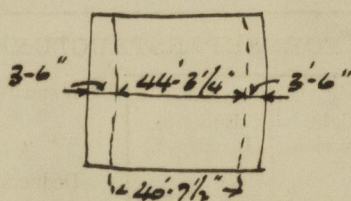
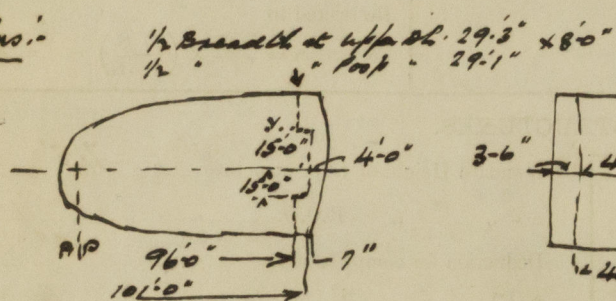
Tropical Fresh Water Freeboard	<b>5' 6"</b>
Fresh Water	<b>6' 0 3/4"</b>
Tropical	<b>6' 1 1/2"</b>
Winter	<b>7' 3"</b>
Winter North Atlantic	<b>7' 7 3/4"</b>



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.



Extractions:-



$$\begin{array}{r} 49.29 \\ 18.18 \\ \hline 231.72 \\ 15.57 \end{array}$$

$$\begin{array}{r} 48-11\frac{1}{2} \\ 4-6 \\ \hline 44-5\frac{1}{2} \end{array}$$

Pooh

$$\begin{array}{r} 96.00 \\ 5 \times 15 = \frac{2.56}{29.25} = \frac{98.56}{101.58} \text{ equiv.} \\ 3.02 \text{ equiv. O.H.} \end{array}$$

BRIDGE

$$\begin{array}{r} \text{ENCLOSED} = 40.62 \\ \frac{2}{3} \times 3.65 = \frac{2.43}{43.05} = \text{equiv. encl.} \\ \text{Eq. Ford Overhang} = \frac{44.12}{43.05} = 1.07 \end{array}$$

FORECASTLE  $\frac{L}{10} = 46.29$

$$\text{Encl} = 44.46$$

$$\text{Sidesham} = \frac{4.5 \times 15.56 \times 2.84}{49.29} = 47.30 = \text{equiv.}$$

Displacement 14,589 Tons  
16,890 Tons  
Depth of keel 1'.

*mit*

Trade of ship Ocean-going Tanker.

Names of sister ships 'British Request' (Yard No. 174) (Similar.)

Builder's name and yard number Swan, Hunter & Wigham Richardson & Co. Ltd No. 1742

Owners British Tanker Co. Ltd.

Fee £

MS



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Foundation