

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

JUL 10 1937

Ship's Name <i>Blythwood S. S. Co. Ltd</i> <i>Nº 50.</i>	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey <i>Glasgow</i>
Moulded Dimensions: Length <i>335.0</i> Breadth <i>56.0</i> Depth <i>14.8</i> ⁷⁹					Date of Survey
Moulded displacement at moulded draught = 85 per cent. of moulded depth tons					Surveyor's Signature <i>R. Dunbar</i>
Coefficient of fineness for use with Tables <i>.82 as given by Builders.</i>					Particulars of Classification <i>+100A1</i> <i>Carrying petroleum in bulk</i> <i>(contemplated).</i>

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth <i>14.8</i> ⁷⁹	(a) Where D is greater than Table depth (D-Table depth) R =	Moulded Breadth (B) <i>56.0</i>
Stringer plate ... <i>0.45</i> <i>.04</i>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{56 \times 12}{50} = 13.44$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = \text{NIL.}$	<i>(22.33 - 14.83) 2.577 = 19.33</i> ^{7.50}	Ship's Round of Beam = <i>14</i>
Depth for Freeboard (D) = <i>14.83</i>	If restricted by superstructures	Difference <i>.56 excess</i>
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.56}{4} \times .2302 = -.03$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	92.25	92.25	7'-3"		92.25
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed					
" overhang aft					
" overhang forward					
F'cle enclosed	39.50	39.50	7'-3"		39.50
" overhang					
Trunk aft		126.10	6'-11½"		126.10
" forward					
Tonnage opening aft					
" forward					
Total	131.75	257.85			257.85

Standard Height of Superstructure	<i>6.85</i>
" R.Q.D.	
Deduction for complete superstructure	<i>37.67</i>
Percentage covered $\frac{S}{L} =$	<i>39.33</i>
" $\frac{S_1}{L} =$	<i>76.98</i>
" $\frac{E}{L} =$	<i>76.98</i>
Percentage from Table, Line A: TANKER	<i>71.59</i>
(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 = $37.67 \times .7159 =$	<i>- 26.97</i>

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	43.50	1		43.50	17.75	17.75	1		17.75
¼L from A.P.	19.355	4		77.42	.10	.10	4		.40
¾L "	4.785	2		9.57	0	-	2		-
Amidships		4		0	-	-	4		-
¾L from F.P.	9.57	2		19.14	0	-	2		-
¼L "	38.71	4		154.84	4.60	4.60	4		18.40
F.P.	87.00	1		87.00	53.5	53.50	1		53.50
Total				391.47					90.05

Mean actual sheer aft = *Deficient*
Mean standard sheer aftMean actual sheer forward = *Deficient*
Mean standard sheer forwardLength of enclosed superstructure forward of amidships =
L
aft of " = *Tanker.*Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{301.42}{18} \left(.75 - \frac{.1966}{.5534} \right) = + 9.27$
If limited on account of midship superstructure.

If limited to maximum allowance of 1½ ins. per 100 ft.

Deduction for Tropical Freeboard.
Addition for Winter and Winter North Atlantic Freeboard.Depth to Freeboard Deck = *14.83*
Summer freeboard = *1.33*
Moulded draught (d) = *13.50*Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = $3.375 = 3\frac{3}{4}$ Addition for Winter North Atlantic Freeboard (if required) = $3.375 + 3.35 = 6.725 = 6\frac{3}{4}$

Deduction for Fresh Water.

Displacement in salt water at summer load water line

Δ =

Tons per inch immersion at summer load water line

T =

Deduction = $\frac{\Delta}{40T}$ inches $\frac{d}{4} = 3\frac{3}{4}$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.82 + .68}{1.36} = \frac{1.50}{1.36}$

	+	-
Depth Correction	-	19.33
Deduction for superstructures	-	26.97
Sheer correction	9.27	-
Round of Beam correction	-	.03
Correction for Thickness of Deck amidships	-	-
Other corrections, scantlings, etc.	-	-
	9.27	46.33

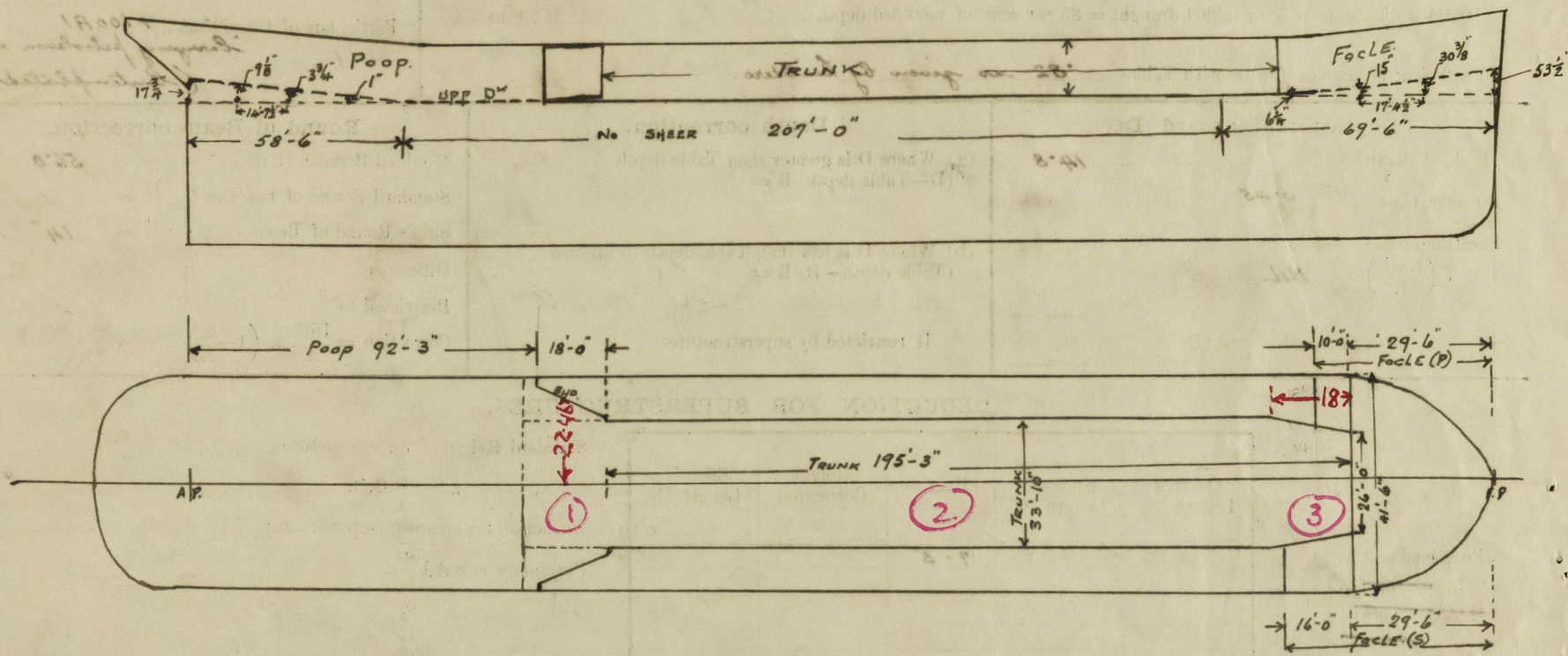
Summer Freeboard = *16.04*

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

Tropical Fresh Water Line above Centre of Disc	6½
Fresh Water Line " "	¾
Tropical Line " "	¾
Winter Line below " "	¾
Winter North Atlantic Line " "	6¾

Tropical Fresh Water Freeboard	0'-9½"
Fresh Water " "	1'-0¾"
Tropical " "	1'-0¾"
Winter " "	1'-7¼"
Winter North Atlantic " "	1'-10¾"

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.



Builders request Preliminary Freeboard.

Approved Plans of Midship Section &

Profile & Berks are forwarded for reference.

Trunk	1.	$18 \times \frac{44.92}{56}$	=	14.44 ✓
	2.	$177.25 \times \frac{33.83}{56}$	=	107.08 ✓
	3.	$8 \times \frac{32.09}{56}$	=	4.58 ✓
				126.10 ✓

$$\frac{10}{18} (33.83 - 26.00)$$

$$= 4.35$$

$$\frac{26.00}{30.35}$$

$$\frac{33.83}{126.10}$$

$$\frac{64.18}{32.09}$$

32.09 = Mean width of Section (3) of Trunk.

Trade of ship

Names of sister ships

Builder's name and yard number Blythwood Ship Building Company Limited.

Nº 50

Owners Anglo-Saxon Petroleum Co. Ltd.



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