

PRELIMINARY FREEBOARD.

R. C.11 (Comp.).

Lloyd's Register of Shipping. SURVEYS FOR FREEBOARD. (COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index. No. **37873**
(For London Office only).

*Similar to
Regent-Tiger
35/60
but 12" less beam.*

Ship's Name SWAN HUNTER AND WIGHAM RICHARDSON LTD. No 1743.	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length 500.69 Breadth 67.0 Depth 35.75 <i>To centre of Rudder Stock.</i>					Date of Survey December 12th 1944
Moulded displacement at moulded draught = 85 per cent. of moulded depth 21,888 tons					Surveyor's Signature
Coefficient of fineness for use with Tables .751					Particulars of Classification +100A1. Carrying petroleum in bulk (contemplated.)

Depth for Freeboard (D). Moulded depth ... 35.75 Stringer plate07 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ ✓ Depth for Freeboard (D) = 35.82	Depth correction. (a) Where D is greater than Table depth (D - Table depth) R = (35.82 - 33.38) × 3.0 = + 7.32 2.44 (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) 67.0 Standard Round of Beam = $\frac{B \times 12}{50} =$ 16.08 Ship's Round of Beam = 17.00 Difference .92 Restricted to ✓ Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) =$ $\frac{.92}{4} \times .5438 = -.12$
--	---	---

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
111-60CR Poop enclosed EQUIV...	110.80	110.80	7'-6"	✓	110.80	Standard Height of Superstructure 7'-6"
109-19IDE " overhang ...						R.Q.D. 42.00
R.Q.D. enclosed ...						Deduction for complete superstructure
" overhang ...						Percentage covered $\frac{S}{L} =$ 45.62
51'-0 CR (Bridge enclosed EQUIV...	49.83	49.83	7'-6"	✓	49.83	" $\frac{S_1}{L} =$ 45.62
47'-6 SIDE " overhang aft ...						" $\frac{E}{L} =$ 45.62
" overhang forward						Percentage from Table, Line A. TANKER. 36.62
F'cle enclosed ...	67.83	67.83	7'-6"	✓	67.83	(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 = 42.00 × .3662 = -15.38
" " forward						
Total ...	228.46	228.46			228.46	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	60.07	1		60.07	61.62	61.62	1		61.62	Mean actual sheer aft = EXCESS.
$\frac{1}{8}$ L from A.P. ...	26.73	4		106.92	27.75	27.75	4		111.00	Mean actual sheer forward = EXCESS.
$\frac{2}{8}$ L " ...	6.61	2		13.22	6.875	6.875	2		13.75	Mean standard sheer aft
Amidships ...	-	4		-	-	-	4		-	Mean standard sheer forward
$\frac{3}{8}$ L from F.P. ...	13.21	2		26.42	13.25	13.25	2		26.50	Length of enclosed superstructure forward of amidships =
$\frac{4}{8}$ L " ...	53.46	4		213.84	54.75	54.75	4		219.00	" " aft of " = } TANKER.
F.P. ...	120.14	1		120.14	121.00	121.00	1		121.00	
Total ...				540.61					552.87	

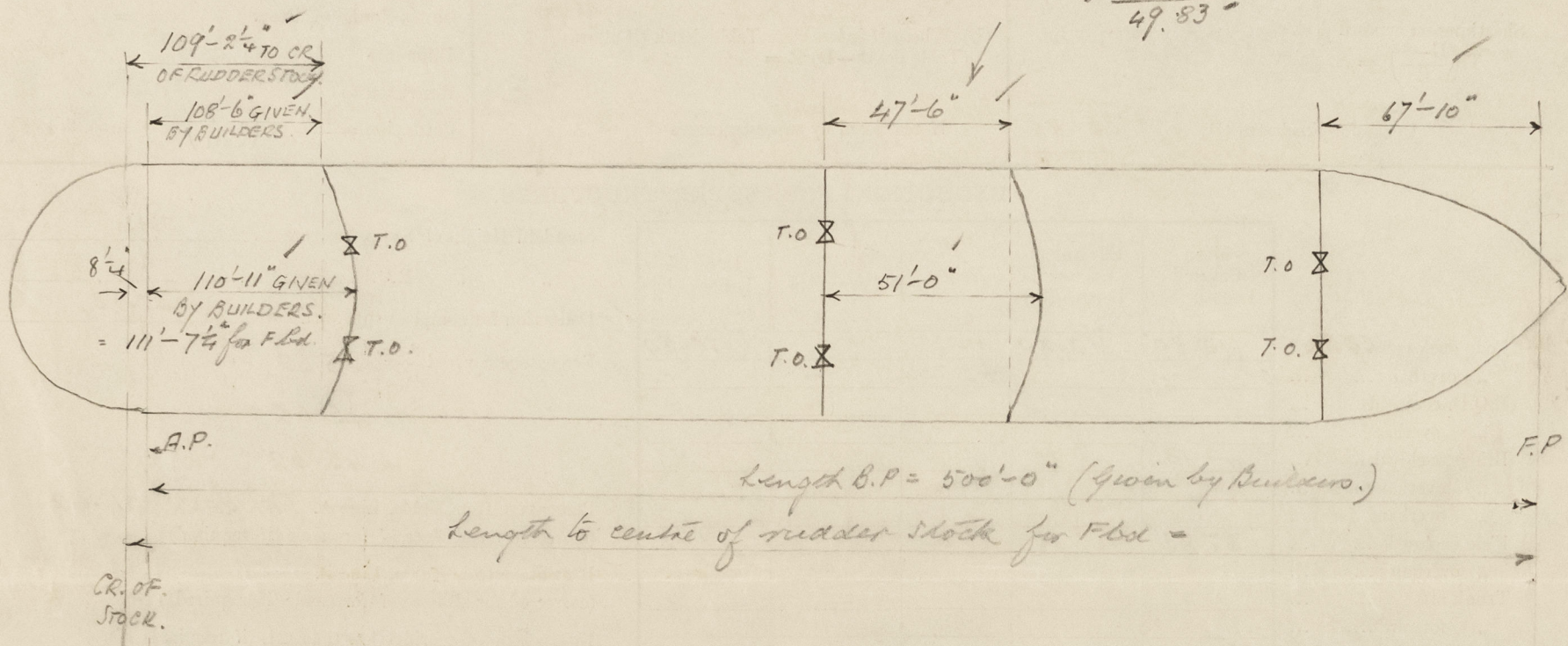
Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{12.26}{18} \left(\frac{75-228.1}{52.9} \right) = - .36$
If limited on account of midship superstructure. **✓** If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft. **✓**

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = 35.82 Summer freeboard = 6.98 Moulded draught (d) = 28.84 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 7.21 = 7$\frac{1}{4}$" Addition for Winter North Atlantic Freeboard (if required) = 7.21 + 5.01 = 12.22 = 12$\frac{1}{4}$"	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 7$\frac{3}{4}$" (From Regent Tiger)	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{.751 + .68}{1.36} = \frac{1.431}{1.36}$ <table border="1"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction ...</td> <td>7.32</td> <td>-</td> </tr> <tr> <td>Deduction for superstructures ...</td> <td>-</td> <td>15.38</td> </tr> <tr> <td>Sheer correction ...</td> <td>-</td> <td>.36</td> </tr> <tr> <td>Round of Beam correction ...</td> <td>-</td> <td>.12</td> </tr> <tr> <td>Correction for Thickness of Deck amidships ...</td> <td>-</td> <td>-</td> </tr> <tr> <td>Other corrections, scantlings, etc. ...</td> <td>-</td> <td>-</td> </tr> <tr> <td></td> <td>7.32</td> <td>15.86</td> </tr> </table> Summer Freeboard = 83.69		+	-	Depth Correction ...	7.32	-	Deduction for superstructures ...	-	15.38	Sheer correction ...	-	.36	Round of Beam correction ...	-	.12	Correction for Thickness of Deck amidships ...	-	-	Other corrections, scantlings, etc. ...	-	-		7.32	15.86
	+	-																								
Depth Correction ...	7.32	-																								
Deduction for superstructures ...	-	15.38																								
Sheer correction ...	-	.36																								
Round of Beam correction ...	-	.12																								
Correction for Thickness of Deck amidships ...	-	-																								
Other corrections, scantlings, etc. ...	-	-																								
	7.32	15.86																								

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

Tropical Fresh Water Line above Centre of Disc ...	15"	Tropical Fresh Water Freeboard ...	5'-11$\frac{3}{4}$"
Fresh Water Line " " ...	7$\frac{3}{4}$"	Fresh Water " " ...	5'-8$\frac{3}{4}$"
Tropical Line " " ...	7$\frac{1}{4}$"	" " " " ...	6'-4"
Winter Line below " " ...	7$\frac{1}{4}$"	Tropical " " ...	6'-4$\frac{1}{2}$"
Winter North Atlantic Line " " ...	12$\frac{1}{4}$"	Winter " " ...	7'-7"
		Winter North Atlantic " " ...	8'-0"

Contre = 111.60'
 Peche = 109.19'
 2.41' $\times \frac{2}{3} = 1.61'$
 110.80'

$$\begin{array}{r} 51.00 \\ 47.50 \\ \hline 3.50 \end{array} \times \frac{2}{3} = \frac{47.50}{2.33} = 49.83$$


Round of beam on Fbd Particulars = 17"
" " " " midship Section = 16 $\frac{3}{4}$ "