

Preliminary

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

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

Ship's Name S. H. W. R. Ltd., Yard No 1592	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length 464.21 Breadth 61.75 Depth 34.04					Date of Survey 21st March 1938
Moulded displacement at moulded draught = 85 per cent. of moulded depth 18198 <i>includes 11 tons for crew stores.</i> tons					Surveyor's Signature
Coefficient of fineness for use with Tables .768					Particulars of Classification 100.A.1 Carrying Petroleum in bulk (contemplated)

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... 34.04	(a) Where D is greater than Table depth (D - Table depth) R = (34.11 - 30.94) 3 = +9.51	Moulded Breadth (B) 61.75
Stringer plate07	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = 3.17	Standard Round of Beam = $\frac{B \times 12}{50} = 14.82$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures ✓	Ship's Round of Beam = 15.00
Depth for Freeboard (D) = 34.11		Difference = Excess = .18"
		Restricted to
		Correction = $\frac{\text{Diff.}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.18}{4} \times .5633 = -.03$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	103.00	103.00	8.00		103.00
„ overhang ...	3.50	1.75			1.75
R.Q.D. enclosed ...					
„ overhang ...					
Bridge enclosed ...	36.00	36.00	8.00		36.00
„ overhang aft ...	3.50	2.63			2.63
„ overhang forward ...	4.00	2.00			2.00
F'cle enclosed <i>Equival.</i> ...	52.06	52.06	8.00		52.06
„ overhang „ ...	5.90	2.95			2.95
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...	202.06	197.44			197.44
„ „ forward ...					
Total ...	207.96	200.39			200.39

Standard Height of Superstructure **7.50'**

„ „ R.Q.D. **✓**

Deduction for complete superstructure **42.00"**

Percentage covered $\frac{S}{L} = 44.80$ **43.53**

„ „ $\frac{S_1}{L} = 43.17$ **42.53**

„ „ $\frac{E}{L} = 43.17$ **42.53**

Percentage from Table, Line A **TANKER 34.17** **33.53**
(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) **✓**
33.53 = -14.08

Deduction = **42.00 × .3417 = -14.35**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	56.42	1		56.42	38.00	38.00	1		38.00
$\frac{1}{4}$ L from A.P. ...	25.105	4		100.42	21.875	21.875	4		87.50
$\frac{2}{8}$ L „ ...	6.205	2		12.41	6.00	6.00	2		12.00
Amidships ...	—	4		—	—	—	4		—
$\frac{3}{8}$ L from F.P. ...	12.41	2		24.82	12.25	12.25	2		24.50
$\frac{1}{2}$ L „ ...	50.21	4		200.84	50.125	50.125	4		200.50
F.P. ...	112.84	1		112.84	113.00	113.00	1		113.00
Total ...				507.75					475.50

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{32.25}{18} \left(.75 - \frac{.2176}{.526} \right) = .94$

If limited on account of midship superstructure. **✓**

Mean actual sheer aft = **Deficient**Mean actual sheer forward = **Deficient**Length of enclosed superstructure forward of amidships = **✓**
aft of „ = **✓** *Tanker.*Deduction for Tropical Freeboard.
Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **34.11**

Summer freeboard = **6.67**

Moulded draught (d) = **27.44**

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = **6.86 = 6 $\frac{3}{4}$**

Addition for Winter North Atlantic Freeboard (if required) = **6.86 + 4.64 = 11.50 = 11 $\frac{1}{2}$**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 17254$

Tons per inch immersion at summer load water line

T = **58.12**

Deduction = $\frac{\Delta}{40T}$ inches = **7.42**

= **7 $\frac{1}{2}$**

TABULAR FREEBOARD corrected for Elbow Deck (if required)

Correction for coefficient $\frac{.768 + .68}{1.36} = .448$

Depth Correction ... **9.51**

Deduction for superstructures ... **14.35**

Sheer correction ... **.94**

Round of Beam correction ... **.03**

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

78.75
83.85

Summer Freeboard = **79.92**

87.8
23.1.38

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

Tropical Fresh Water Line above Centre of Disc ...	14 $\frac{1}{4}$
Fresh Water Line „ „ ...	7 $\frac{1}{2}$
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 ...	5 $\frac{5}{8}$
Fresh Water „ „ ...	6 $\frac{1}{2}$
Tropical „ „ ...	6 $\frac{1}{4}$
Winter „ „ ...	7 $\frac{1}{2}$
Winter North Atlantic „ „ ...	7 $\frac{1}{2}$

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.

Total Length of Forecastle = 57.96'

$$\text{Recess} = \frac{(18.00 \times 13.50) + (5.00 \times 13.50)}{52.67} = \frac{310.50}{52.67} = \frac{57.96}{52.06} = \text{Overhang} = \text{Equivalent enclosed length.}$$

Trade of ship

Names of sister ships

Builder's name and yard number

Owners

Fee £



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