

B.T. COPY!

Index. No. 3
(For London Office only).

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Bot. C.11 (Comp.).

John x Woker 3609
C.F. Kayser 34999
T. C. F. Kayser 35081
C. F. Kayser 35649

Ship's Name T. H. WATERMEYER	Official Number <i>not assigned</i>	Nationality and Port of Registry BRITISH EAST LONDON	Gross Tonnage 440 620 619.83	Date of Build 1939	Port of Survey GLASGOW
Moulded Dimensions: Length 145' Breadth 33' Depth 17.09' <i>as measured</i> <i>note: - Lowest point of sheer about 5'0" aft of midships = 17.02'</i> Moulded displacement at moulded draught = 85 per cent. of moulded depth 1278 tons Coefficient of fineness for use with Tables .68 (<i>.643 actual</i>)					Surveyor's Signature <i>J. Thomson</i> Particulars of Classification 100A1 <i>For towing purposes</i> <i>Contingents</i>

Depth for Freeboard (D). Moulded depth ... 17.09' Stringer plate .35"03 Sheathing on exposed deck 3 1/2" teak $T \left(\frac{L-S}{L} \right) = .29 \times .7026 = .20$ Depth for Freeboard (D) = 17.32'	Depth correction. (a) Where D is greater than Table depth (D - Table depth) R = $(17.32 - 9.67) 1.115 = +8.53$ ✓ (b) Where D is less than Table depth (if allowed) (Table depth - D) R = 7.65 If restricted by superstructures ✓	Round of Beam correction. Moulded Breadth (B) 33'-0" Standard Round of Beam = $\frac{B \times 12}{50} = 7.92$ ✓ Ship's Round of Beam = 8 1/4" ✓ Difference Excess = .33 ✓ Restricted to Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.33}{4} \times .7026 = -.06$
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L of Bridge Bds to BCL = 43.12'
less runs (P.R.S.) = .31
3.75 x 9.25 = 42.81
33

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...	42.81 ✓	42.81 ✓	7'-6"		42.81 ✓
" overhang aft31 ✓	.23 ✓			.23 ✓
" overhang forward					
Fore enclosed ...					
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward					
Total ...	43.12 ✓	43.04 ✓			43.04 ✓

Standard Height of Superstructure **6.00'** ✓
" " R.Q.D. **20.50"** ✓
Deduction for complete superstructure **20.50"** ✓
Percentage covered $\frac{S}{L} = 29.74$ ✓
" $\frac{S_1}{L} = 29.68$ ✓
" $\frac{E}{L} = 29.68$ ✓
Percentage from Table, Line A.
(corrected for absence of forecastle (if required))
Percentage from Table, Line B. **18.80 - 5.00 = 13.80** ✓
(corrected for absence of forecastle (if required))
Interpolation for bridge less than 2L (if required)
Deduction = **20.50 x .1380 = 2.83"** ✓

Sheer taken from a line drawn parallel to keel and passing through sheerless amidships **SHEER CORRECTION.**

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	24.50 ✓	1	24.50 ✓	36.00 ✓	36.00 ✓	1	36.00 ✓
1/2 L from A.P. ...	10.90 ✓	4	43.60 ✓	13.63 ✓	13.63 ✓	4	54.52 ✓
2/2 L " ...	2.70 ✓	2	5.40 ✓	2.00 ✓	2.00 ✓	2	4.00 ✓
Amidships ...	-	4	-	-	-	4	-
2/2 L from F.P. ...	5.39 ✓	2	10.78 ✓	9.00 ✓	9.00 ✓	2	18.00 ✓
1/2 L " ...	21.80 ✓	4	87.20 ✓	30.50 ✓	30.50 ✓	4	122.00 ✓
F.P. ...	49.00 ✓	1	49.00 ✓	66.25 ✓	66.25 ✓	1	66.25 ✓
Total ...			220.48 ✓				300.77 ✓

Mean actual sheer aft = **Excess**
Mean standard sheer aft = **Excess**
Mean actual sheer forward = **Excess**
Mean standard sheer forward = **Excess**
Length of enclosed superstructure forward of amidships = **7.11** ✓
" " aft of " = $\frac{6.57}{14.5} = .045$ ✓
2.68 x .145 = 1.94" ✓

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{80.29}{18} \left(\frac{.75 - .1487}{.6013} \right) = -2.68$ ✓
If limited on account of midship superstructure. **Yes** ✓
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 = **17.12** ✓
Summer freeboard = **1.35** ✓
Moulded draught (d) = **15.77** ✓
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = **3.94 = 4"**
Addition for Winter North Atlantic Freeboard (if required) = **4" + 2" = 6"**

Deduction for Fresh Water.

Displacement in salt water at summer load water line
 $\Delta = 1432$
Tons per inch immersion at summer load water line
 $T = 9.64$
Deduction = $\frac{\Delta}{40T}$ inches = **3 3/4"** ✓

TABULAR FREEBOARD corrected for Fresh Deck (if required)

Correction for coefficient ✓

	+	-
Depth Correction ...	8.53 ✓	-
Deduction for superstructures ...	-	2.83 ✓
Sheer correction ...	-	1.94 ✓
Round of Beam correction ...	-	.06 ✓
Correction for Thickness of Deck amidships ...	-	2.40 ✓
Other corrections, scantlings, etc. ...	-	-
8.53	7.23	+ 1.30 ✓

Summer Freeboard = **16.15** ✓
(2" table deduction in way of draught)

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

Tropical Fresh Water Line above Centre of Disc ...	7 3/4" ✓
Fresh Water Line " " ...	3 3/4" ✓
Tropical Line " " ...	4" ✓
Winter Line below " " ...	4" ✓
Winter North Atlantic Line " " ...	6" ✓

Tropical Fresh Water Freeboard ...	0'-8 1/2" ✓
Fresh Water " " ...	1'-0 1/2" ✓
Tropical " " ...	1'-0 1/4" ✓
Winter " " ...	1'-8 1/4" ✓
Winter North Atlantic " " ...	1'-10 1/4" ✓

26 SEP 1939

T. H. Watermeyer.

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.

Bridge

43.12

$$\frac{2.75 \times 1.845 \times 2}{33.0.}$$

$$\frac{.31}{42.81}$$

Trade of ship

For towing services

Names of sister ships

"THEODOR WOKER." INGLIS YARD NO. 1020 (P) Ab. Rpt No 6/433 also "OTTO SIEDLE," "JOHN X. MERRIMAN,"
"F. SCHERMBRUCKER," "T. ERIKSEN," & "G. F. KAYSER."

Builder's name and yard number

A of Inglis Ltd. No. 1021. (P)

Owners

Union Govt. of South Africa (Railways & Harbours Administration)

Fee £

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