

AUG 31 1937

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(For London Office only).

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name TUG "ENGLISHMAN"	Official Number	Nationality and Port of Registry British	Gross Tonnage	Date of Build 1937.	Port of Survey Hull.
Moulded Dimensions: Length 135.0' Breadth 30.0' Depth 16.0'					Date of Survey while building
Moulded displacement at moulded draught = 85 per cent. of moulded depth 887 tons					Surveyor's Signature <i>J. M. M. M.</i>
Coefficient of fineness for use with Tables .564 (.68 lowest in tables)					Particulars of Classification + 100 A.1. "In towing services" (contemplated).

Depth for Freeboard (D).		Depth correction.	Round of Beam correction.
Moulded depth ...	16.00	(a) Where D is greater than Table depth (D - Table depth) R = (16.21 - 9.00) 1.038 = + 4.48"	Moulded Breadth (B) 30.0'
Stringer plate50	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} =$ 7.20"
Sheathing on exposed deck (5' x 3" teak deck) $T \left(\frac{L-S}{L} \right) =$ SEE SKETCH.	.17	If restricted by superstructures <input checked="" type="checkbox"/>	Ship's Round of Beam = 9"
Depth for Freeboard (D) =	16.21		Difference excess = 1.80"
			Restricted to
			Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{1.8}{4} \times .8148 = -.37"$

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...			<i>Actual 3.25</i>		
" overhang aft ...					
" overhang forward			VIRTUAL		
F'cle enclosed ...	25.00	25.00	3.08	3.08/6.00	12.83
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward					
Total ...	25.00	25.00			12.83

Standard Height of Superstructure	6.00'
" " R.Q.D.	<input checked="" type="checkbox"/>
Deduction for complete superstructure	19.50"
Percentage covered $\frac{S}{L} =$	18.52
" " $\frac{S_1}{L} =$	18.52
" " $\frac{E}{L} =$	9.50
Percentage from Table, Line A.	4.75
(corrected for absence of forecastle (if required))	
Percentage from Table, Line B.	<input checked="" type="checkbox"/>
(corrected for absence of forecastle (if required))	
Interpolation for bridge less than .2L (if required)	<input checked="" type="checkbox"/>
Deduction = $19.50 \times .0475 =$.93"

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	23.50	1	23.50	45"	45.00	1	45.00	1	45.00
$\frac{1}{2}$ L from A.P. ...	10.46	4	41.84	24	24.00	4	96.00	4	96.00
$\frac{2}{3}$ L " ...	2.585	2	5.17	82	8.50	2	17.00	2	17.00
Amidships ...	-	4	-	0	-	4	-	4	-
$\frac{2}{3}$ L from F.P. ...	5.17	2	10.34	5	5.00	2	10.00	2	10.00
$\frac{1}{2}$ L " ...	20.915	4	83.66	24	24.00	4	96.00	4	96.00
F.P. ...	47.00	1	47.00	57"	57.00	1	57.00	1	57.00
Total ...			211.51				321.00		

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - \frac{S}{2L}}{\frac{S}{2L}} \right) = \frac{109.49}{18} \left(\frac{.75 - .0926}{.6574} \right) = 4.00"$
If limited on account of midship superstructure. *Yes. no allowance.* 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.

Raised
Depth to Freeboard Deck = **16.29**
Summer freeboard = **1.43**
Moulded draught (d) = **14.56**

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = **3.64 = 3 $\frac{3}{4}$**
Addition for Winter North Atlantic Freeboard (if required) = **5 $\frac{3}{4}$**

Deduction for Fresh Water.

Displacement in salt water at summer load water line.
 $\Delta = 980$
Tons per inch immersion at summer load water line
 $T = 7.80$
Deduction = $\frac{\Delta}{40T}$ inches
 $= 3.14 = 3 $\frac{1}{4}$$

CORRECTED FOR SUPERSTRUCTURES LESS THAN .1L.
TABULAR FREEBOARD

Correction for coefficient ☒

	+	-
Depth Correction	4.48	
Deduction for superstructures		.93
Sheer correction		.37
Round of Beam correction		
Correction for Thickness of Deck amidships	.96	
Other corrections, scantlings, etc.		
	8.44	1.30
	+ 4.14	

Raised

Summer Freeboard = **20.84**

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

Tropical Fresh Water Line above Centre of Disc	4"
Fresh Water Line	3 $\frac{1}{4}$"
Tropical Line	3 $\frac{3}{4}$"
Winter Line below	3 $\frac{3}{4}$"
Winter North Atlantic Line	5 $\frac{3}{4}$"

Tropical Fresh Water Freeboard	1' 8 $\frac{3}{4}$"
Fresh Water	1' 5 $\frac{1}{2}$"
Tropical	1' 5"
Winter	2' 0 $\frac{1}{2}$"
Winter North Atlantic	2' 2 $\frac{1}{2}$"

the Surveyor should endorse the form on this side with his signature and the date.

<p>Depth for Freeboard (D) =</p> <p>Shipping on exposed deck (2'-3" for deck)</p> <p>SEE SKETCH.</p> <p>$T \left(\frac{L-S}{L} \right) =$</p> <p>Minimum plate</p> <p>Moulded depth</p> <p>Depth for Freeboard (D)</p>	<p>H. restricted by superstructure</p> <p>Table depth - (T) E =</p> <p>W. where D is less than Table depth (if allowed)</p> <p>Table depth - (T) E =</p> <p>Depth correction</p> <p>Round of Beam correction</p>	<p>Correction for</p> <p>Restriction to</p> <p>Ultimate</p> <p>Ship's Headed Beam</p> <p>Minimum Head of Beam as</p> <p>Moulded Beam (B)</p> <p>Round of Beam correction</p> <p>30.0</p> <p>9"</p>
<p>Shipping on exposed deck (2'-3" for deck)</p> <p>SEE SKETCH.</p> <p>$T \left(\frac{L-S}{L} \right) =$</p> <p>Minimum plate</p> <p>Moulded depth</p> <p>Depth for Freeboard (D)</p>	<p>H. restricted by superstructure</p> <p>Table depth - (T) E =</p> <p>W. where D is less than Table depth (if allowed)</p> <p>Table depth - (T) E =</p> <p>Depth correction</p> <p>Round of Beam correction</p>	<p>Correction for</p> <p>Restriction to</p> <p>Ultimate</p> <p>Ship's Headed Beam</p> <p>Minimum Head of Beam as</p> <p>Moulded Beam (B)</p> <p>Round of Beam correction</p> <p>30.0</p> <p>9"</p>
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Trade of ship. *For turning services.*

Names of sister ships

Builder's name and yard number Missus Lochrane & Sons Ltd, Selby. Yards N^o 1184.

Owners. United Loring Co. Ltd.

Fee £ to be charged with first entry.