

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

ICSD

Ship's Name MANCHESTER PROGRESS	Official Number 147432	Nationality and Port of Registry British, Manchester	Gross Tonnage 5640 <small>7346 M.O.T. 57.52</small>	Date of Build 1938	Port of Survey
Moulded Dimensions: Length 428.0' Breadth 56.67 Depth 38.12'					Date of Survey 30.5.41
Moulded displacement at moulded draught = 85 per cent. of moulded depth tons					Surveyor's Signature
Coefficient of fineness for use with Tables 733 (Estimated)					Particulars of Classification + 100A1 with freeboard.

Depth for Freeboard (D).		Depth correction.		Round of Beam correction.	
Moulded depth ...	38.12'	(a) Where D is greater than Table depth		Moulded Breadth (B)	56.67'
Stringer plate ...	41	(b) Where D is less than Table depth (if allowed)		Standard Round of Beam = $\frac{B \times 12}{50}$	13.60"
Sheathing on exposed deck		(Table depth - D) R =	9.62	Ship's Round of Beam	13.50"
T $\left(\frac{L-S}{L}\right) =$		If restricted by superstructures	✓	Difference	10"
Depth for Freeboard (D) =	38.15			Restricted to	✓
				Correction = $\frac{\text{Diff}^*}{4} \times \left(1 - \frac{S_1}{L}\right)$	= $\frac{10}{4} \times 6080 = +.02$

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...	130.57	130.57	7.5'	✓	130.57
.. overhang aft ...					
.. overhang forward	37.20	37.20	7.5'	✓	37.20
F'cle enclosed ...					
.. overhang ...					
Trunk aft ...					
.. forward ...					
Tonnage opening aft ...					
.. forward					
Total ...	167.77	167.77			167.77

Standard Height of Superstructure **7.5'**

.. .. R.Q.D. **✓**

Deduction for complete superstructure **42.00"**

Percentage covered $\frac{S}{L} =$

.. .. $\frac{S_1}{L} =$

.. .. $\frac{E}{L} =$

Percentage from Table, Line A. **✓**

(corrected for absence of forecastle (if required)) **26.82**

Percentage from Table, Line B. **✓**

(corrected for absence of forecastle (if required)) **✓**

Interpolation for bridge less than 21' (if required) **✓**

Deduction = **42 x .2682 = -11.26"**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	52.80	1		52.80	54.0	54.0	1		54.00
$\frac{1}{4}$ L from A.P. ...	23.495	4		93.98	23.5	23.5	4		94.00
$\frac{1}{2}$ L ..	5.81	2		11.62	5.12	5.12	2		10.24
Amidships ...	-	4		-	-	-	4		-
$\frac{3}{4}$ L from F.P. ...	11.62	2		23.24	11.25	11.25	2		22.50
$\frac{1}{2}$ L ..	46.99	4		187.96	48.00	48.00	4		192.00
F.P. ...	105.60	1		105.60	109.00	109.00	1		109.00
Total ...				475.20					481.74

Mean actual sheer aft = **Deficient > 75%**

Mean standard sheer aft

Mean actual sheer forward = **Excess**

Mean standard sheer forward

Length of enclosed superstructure forward of amidships = **> 1.**

.. .. aft of .. = **> 1.**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{6.54}{18} (75 - .1960) = -.20"$

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

5540 If limited to maximum allowance of 1½ ins. per 100 ft. **✓**

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Deduction for Fresh Water.

Displacement in salt water at summer load water line

Depth to Freeboard Deck = **38.15'**

Summer freeboard = **10.9189**

Moulded draught (d) = **27.2326**

Δ =

Tons per inch immersion at summer load water line

T =

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = **6.81 = 6¾"**

Addition for Winter North Atlantic Freeboard (if required) =

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

7"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient **733 + .68 = 1413/1.36**

1.36

Depth Correction ... **28.86**

Deduction for superstructures ... **11.26**

Sheer correction ... **.20**

Round of Beam correction ... **.02**

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. **to correct point**

with a summer moulded draught of **27'-3"** (27'-3½" actual)

Summer Freeboard = **130.75**

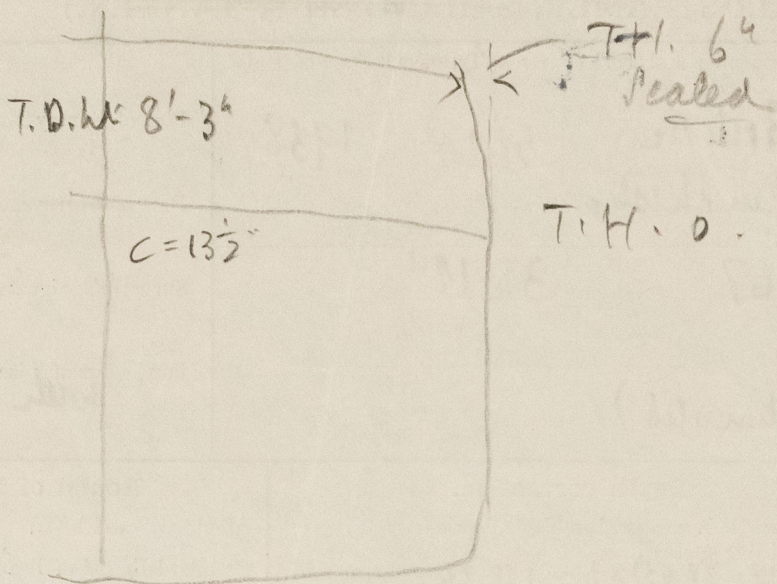
SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc	13¾"
Fresh Water Line	7"
Tropical Line	6¾"
Winter Line below	6¾"
Winter North Atlantic Line	✓

Tropical Fresh Water Freeboard	10'-4" 10¾"
Fresh Water	9'-9"
Tropical	10'-4" 10¾"
Winter	11'-5"
Winter North Atlantic	✓

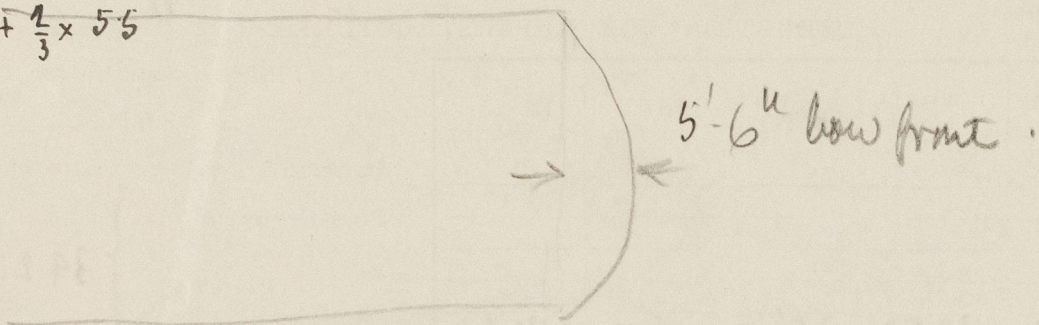
A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.

Plan Part 428 x 58-8 x 29-10 to Second Dr.



Equivalent length
of bridge

$$\begin{array}{r} 126.9' \\ 3.67 \\ \hline 130.57' \end{array} + \frac{1}{3} \times 55$$



Trade of ship

Names of sister ships

Builder's name and yard number

Owners

Fee £



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Foundation