

APR 30 1937

Rpt. C.11 (Comp.).

Index. No. 35073
(For London Office only).

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, ~~SAILING SHIP~~, TANKER.)

N^o 32072

Ship's Name LOCH DEE. <i>to centre of rudder stock</i>	Official Number	Nationality and Port of Registry BRITISH GLASGOW.	Gross Tonnage 5252	Date of Build 1937	Port of Survey Sunderland
Moulded Dimensions: Length 409.0' 409.84	Breadth 58.5'	Depth 28.83'	Date of Survey While Building		
Moulded displacement at moulded draught = 85 per cent. of moulded depth 12018 tons			Surveyor's Signature W. E. Miller		
Coefficient of fineness for use with Tables 7186 . 716.			Particulars of Classification +100 A1 with freeboard Class Contemplated		

Depth for Freeboard (D). Moulded depth ... 28.83' Stringer plate58"05 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ ✓ Depth for Freeboard (D) = 28.88'	Depth correction. (a) Where D is greater than Table depth (D-Table depth) R = (28.88 - 27.32) 3 = + 4.68" (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) 58'-6" Standard Round of Beam = $\frac{B \times 12}{50} =$ 14.04" Ship's Round of Beam = 14 1/2" ✓ Difference Excess = .46" Restricted to Correction = $\frac{\text{Diff}^*}{4} \times \left(1 - \frac{S_1}{L} \right) =$ 46/4 x .0065 = NIL.
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	21.75	21.75	8.41	✓	21.75	Standard Height of Superstructure 7.50
.. overhang96	.96		✓	.48	.. R.Q.D. ✓
R.Q.D. enclosed48				Deduction for complete superstructure 42.00
.. overhang ...						Percentage covered $\frac{S}{L} =$ 100.00
Bridge enclosed...	383.12	383.12	9.91	✓	383.12	.. $\frac{S_1}{L} =$ 99.35
.. overhang aft $\frac{E}{L} =$ 99.35
.. overhang forward						Percentage from Table, Line A. 99.20
F'cle enclosed ...						(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 ...	4.04	4.04	1.85		1.85	Deduction = 42.00 x .9920 = 41.66"
.. forward						
Total ...	409.84	409.84	404.20		404.20	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	50.99	1	50.99	79 1/4	108.17	1	108.17			Mean actual sheer aft = Excess
1/4 L from A.P. ...	22.69	4	90.46	29 7/8	48.13	4	192.52			Mean standard sheer aft = Excess
1/2 L ..	5.61	2	11.22	6	11.90	2	23.80			Mean actual sheer forward = Excess
Amidships ...	-	4	-	0	-	4	-			Mean standard sheer forward
3/4 L from F.P. ...	11.22	2	22.44	7 5/8	11.97	2	23.94			Length of enclosed superstructure forward of amidships =
1/4 L ..	45.37	4	181.48	34 3/8	48.42	4	193.68			.. aft of .. =
F.P. ...	101.97	1	101.97	79 7/8	108.80	1	108.80			
Total ...			458.86	+28.92			650.91			

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{192.05}{18} \left(.75 - \frac{50}{200} \right) = -2.67"$
 If limited on account of midship superstructure. **✓**

Actual height of superstructure = 9.91
 Standard " " = 7.50
 Excess = 2.41
 = 28.92"

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 = **6.8.8.**
 .. aft of .. = **6.8.8.**

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = 28.88' Summer freeboard = 3.08 Moulded draught (d) = 25.80 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.45 = 6 1/2" Addition for Winter North Atlantic Freeboard (if required) = ✓	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta = 12836$ Tons per inch immersion at summer load water line $T = 47.50$ Deduction = $\frac{\Delta}{40 T}$ inches = 6.76 = 6 3/4"	TABULAR FREEBOARD corrected for Plank Deck (if required) Correction for coefficient $\frac{.716 + .68}{1.36} = \frac{1.396}{1.36}$ Depth Correction ... 4.68 Deduction for superstructures ... 41.66 Sheer correction ... 2.67 Round of Beam correction ... - Correction for Thickness of Deck amidships ... - Other corrections, scantlings, etc. ... - 4.68 41.66 2.67 - 39.65 Summer Freeboard = 36.89
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:

Tropical Fresh Water Line above Centre of Disc ...	13 1/4"	Tropical Fresh Water Freeboard ...	1' 11 3/4"
Fresh Water Line " " ...	6 3/4"	Fresh Water " " ...	2' 6 1/4"
Tropical Line " " ...	6 1/2"	Tropical " " ...	2' 6 1/2"
Winter Line below " " ...	6 1/2"	Winter " " ...	3' 1 1/2"
Winter North Atlantic Line " " ...	✓	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.

Actual displacement at actual draft 25'-11" = 12800 tons
Long Res Inch = 47.50.

OK 17

Trade of ship

Names of sister ships

Builder's name and yard number Messrs J.L. Thompson & Sons Ltd. No. 578

Owners Messrs MacLay W. Intyre Ltd.

Fee £

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OK 17

Will be charged on completion



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