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(For London Office only).

60 January 39280

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name O X N A R.A.S.C.	Official Number <i>To follow</i>	Nationality and Port of Registry British	Gross Tonnage <i>To follow</i> 460	Date of Build 1941	Port of Survey Torquay at Devonport
Moulded Dimensions: Length 150' 0" ^{152' 00"} Breadth 27' 6" Depth 15' 0" <i>.96 x length on SLWL.</i>					Date of Survey February, 1948.
Moulded displacement at moulded draught = 85 per cent. of moulded depth 935 tons					Surveyor's Signature <i>[Signature]</i>
Coefficient of fineness for use with Tables .68 (.616 actual)					Particulars of Classification + 100 A.1.

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... 15' 00	(a) Where D is greater than Table depth (D - Table depth) R = $(15.11 - 10.13) 1.169 = + 5.82$ 4.98	Moulded Breadth (B) 27' 6"
Stringer plate026	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = 6.6"$
$2\frac{1}{2}"$ Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = \frac{2.5 \times 59}{12 \times 152} = .081$	If restricted by superstructures ✓	Ship's Round of Beam = 7"
Depth for Freeboard (D) = 15.11		Difference = +.40
		Restricted to ✓
		Correction = $\frac{\text{Diff}^*}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.40}{4} \times .8339 = .08"$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
.. overhang ...					
R.Q.D. enclosed ...					
.. overhang ...					
Bridge enclosed ...					
.. overhang aft ...					
.. overhang forward ...					
F'cle enclosed ...	26' 0" 25.25	25.25	6' 6"	✓	25.25
.. overhang ...					
Trunk aft ...					
.. forward ...					
Tonnage opening aft ...					
.. forward ...					
Total ...	25.25	25.25			25.25

Standard Height of Superstructure **6' 00"**
 " " R.Q.D. ✓
 Deduction for complete superstructure **21.2**
 Percentage covered $\frac{S}{L} =$
 $\frac{S_i}{L} =$ } **16.61**
 $\frac{E}{L} =$
 Percentage from Table, Line A. **8.305**
 (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) ✓
 Deduction = $21.2 \times .8305 = -1.74"$

SHEER CORRECTION. Vessel of Normal design Main draft loaded 11' 2 1/2" trim by stern 3' 11 1/2"

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	25.20	1	25.20	67"	43.29	1	25.20
1/4 L from A.P. ...	11.215	4	44.86	39"	23.17	4	44.86
3/8 L ..	2.77	2	5.54	15"	7.08	2	5.54
Amidships ...	-	4	-	0"	0	4	0
3/8 L from F.P. ...	5.54	2	11.08	-6"	1.92	2	3.84
1/4 L ..	22.43	4	89.72	0"	15.83	4	63.32
F.P. ...	50.40	1	50.40	17"	40.75	1	40.75
Total ...			226.80				183.51

Mean actual sheer aft = **Excess**
 Mean standard sheer aft =
 Mean actual sheer forward = **Deficient**
 Mean standard sheer forward =
 Length of enclosed superstructure forward of amidships = } **deficient**
 aft of .. = } **sheer**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{43.29}{18} \left(\frac{.75 - .08305}{21.2} \right) = + 1.60"$
 If limited on account of midship superstructure. ✓
 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.
 Ft.
 Depth to Freeboard Deck = 15.03
 Summer freeboard = 2.23
 Moulded draught (d) = 12.80
 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = $\frac{12.80}{4} = 3.20 = 3\frac{1}{4}"$
 Addition for Winter North Atlantic Freeboard (if required) = $5\frac{1}{4}"$

Deduction for Fresh Water.
 Displacement in salt water at summer load water line
 $\Delta = 774$ tons
 Tons per inch immersion at summer load water line
 $T = 8.27$ tons
 Deduction = $\frac{\Delta}{40T}$ inches = $\frac{774}{40 \times 8.27} = 3\frac{1}{4}"$

TABULAR FREEBOARD corrected for Fresh Deck (if required)		15.78
Correction for coefficient	NIL	15.78
Depth Correction	5.82	-
Deduction for superstructures	- 1.74	
Sheer correction	1.60	
Round of Beam correction	- .08	
Correction for Thickness of Deck amidships	- .06	
Other corrections, scantlings etc. <i>6" below sill of lowest side-scantling</i>	6.34	
	13.76	2.78
		+ 10.98
		Summer Freeboard = 26.76

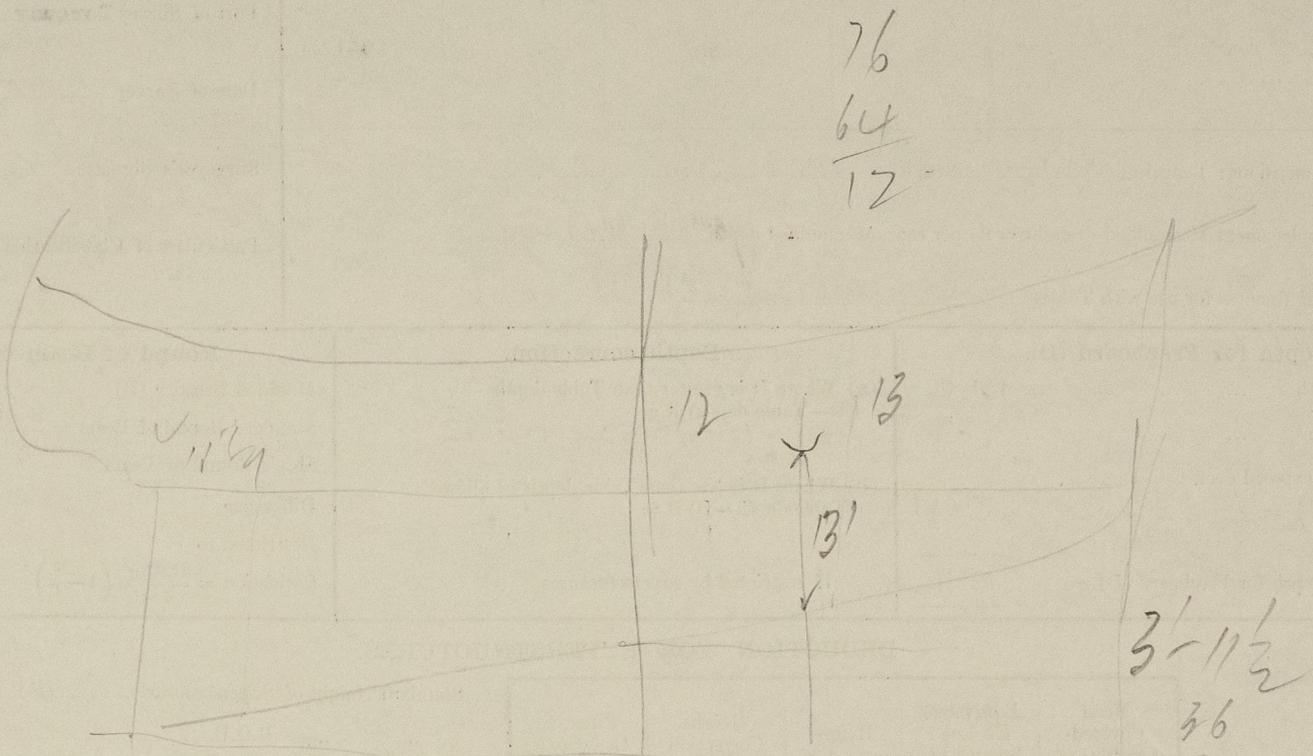
SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~W~~ Steel Deck:

Tropical Fresh Water Line above Centre of Disc ...	3 1/4"
Fresh Water Line	3 1/4"
Tropical Line	NIL
Winter Line below	NIL
Winter North Atlantic Line	NIL

Tropical Fresh Water Freeboard ...	2' - 2 3/4"
Fresh Water	1' - 11 1/2"
Tropical	1' - 11 1/2"
Winter	2' - 2 3/4"
Winter North Atlantic	2' - 2 3/4"

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.

SURVEYOR'S FORM FOR FREEBOARD
(CONTAINS INFORMATION FOR SHIP'S SURVEILLANCE)



$$\begin{array}{r} 15.75 \\ 14.79 \\ \hline .96 \\ \hline \end{array}$$

$$\begin{array}{r} 12.81 \\ 1.98 \\ \hline 10.79 \end{array}$$

$$\begin{array}{r} 23.75 \\ \times 12 \\ \hline 26 \end{array}$$

$$\begin{array}{r} 13 \\ - 3.75 \\ \hline 13' - 3 \frac{3}{4} \\ - 4 \\ \hline 12 - 9 \frac{3}{4} \\ 12.81 \end{array}$$

Trade of ship _____

Names of sister ships "Copinsay"

Builder's name and yard number Cochrane & Sons Ltd., Selby.

Owners War Office (Royal Army Service Corps.)

Fee £ 2