

Rpt. C.11.

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

Having

BRIDGE and Forecastle.

ELPIS

(Type of Superstructures.)

Port of Survey Cardiff

Date of Survey 10th & 17th Nov, 1932

Name of Surveyor E. J. Brimblecomb

Particulars of Classification +100A1

S.S. Cl. No. 3-11-32

Ship's Name **ex.s.s. "LLANTHONY ABBEY"**
Nationality and Port of Registry **British Greek Cardiff**
Official Number **144290**
Gross Tonnage **1492**
Date of Build **1919, 12 mo.**

Moulded Dimensions: Length **239.75** Breadth **36.0** Depth **21.25**
Moulded displacement at moulded draught = 85 per cent. of moulded depth **3345** tons
Coefficient of fineness for use with Tables **.751**

Depth for Freeboard (D)
Moulded depth ... **21.25**
Stringer plate ... **.56"**
Sheathing on exposed deck
 $T \left(\frac{L-S}{L} \right) =$ ✓
Depth for Freeboard (D) = **21.30**

Depth correction
(a) Where D is greater than Table depth
(D - Table depth) R =
 $(21.30 - 15.98) 1.844 = +9.81$
(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) **36.0**
Standard Round of Beam = $\frac{B \times 12}{50} = 8.64$
Ship's Round of Beam = **9"**
Difference **.36**
Restricted to
Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.36}{4} \times .7098 = -.06$

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 ...	51.75	46.57	7'-0"	✓	46.57
" overhang aft ...					
" overhang forward ...					
F'cle enclosed ...	23.0	23.00	7'-0"	✓	23.00
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	74.75	69.57			69.57

Standard Height of Superstructure **6.0**
" " R.Q.D. ✓
Deduction for complete superstructure **29.975**
Percentage covered $\frac{S}{L} = 31.18\%$
" " $\frac{S_1}{L} = 29.02\%$
" " $\frac{E}{L} = 29.02\%$
Percentage from Table, Line A. ✓
(corrected for absence of forecastle (if required)) ✓
Percentage from Table, Line B. **18.37%**
(corrected for absence of forecastle (if required)) ✓
Interpolation for bridge less than 2L (if required) ✓
Deduction = **29.975 × .1837 = - 5.51**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	33.975	1		33.98	51.5	51.50	33.98	1	33.98
$\frac{1}{2}$ L from A.P. ...	15.12	4		60.48	25.67	28.2	15.12	4	60.48
$\frac{2}{3}$ L " ...	3.74	2		7.48	6.4	9.8	3.74	2	7.48
Amidships ...	✓	4		✓	✓	✓	✓	4	✓
$\frac{2}{3}$ L from F.P. ...	7.47	2		14.94	6.01	3.75	3.75	2	7.50
$\frac{1}{2}$ L " ...	30.23	4		120.92	24.1	22.30	22.30	4	89.20
F.P. ...	67.95	1		67.95	62.5	62.50	62.50	1	62.50
Total ...				305.75					261.14

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{44.61}{18} \times (.75 - .1559) = +1.47$

If limited on account of midship superstructure.

Mean actual sheer aft = **Excess**
Mean standard sheer aftMean actual sheer forward = **Deficient**
Mean standard sheer forward

Length of enclosed superstructure forward of amidships = $\frac{24.875}{119.875} = .208$
" " aft of " = $\frac{26.875}{119.875} = .224$

.5941

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

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Ft.
Depth to Freeboard Deck = **21.30**
Summer freeboard = **3.12**
Moulded draught (d) = **18.18**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = **4.54** 4½

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

Δ =

Tons per inch immersion at summer load water line

T =

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

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.751 + .68}{1.36} = \frac{1.431}{1.36}$

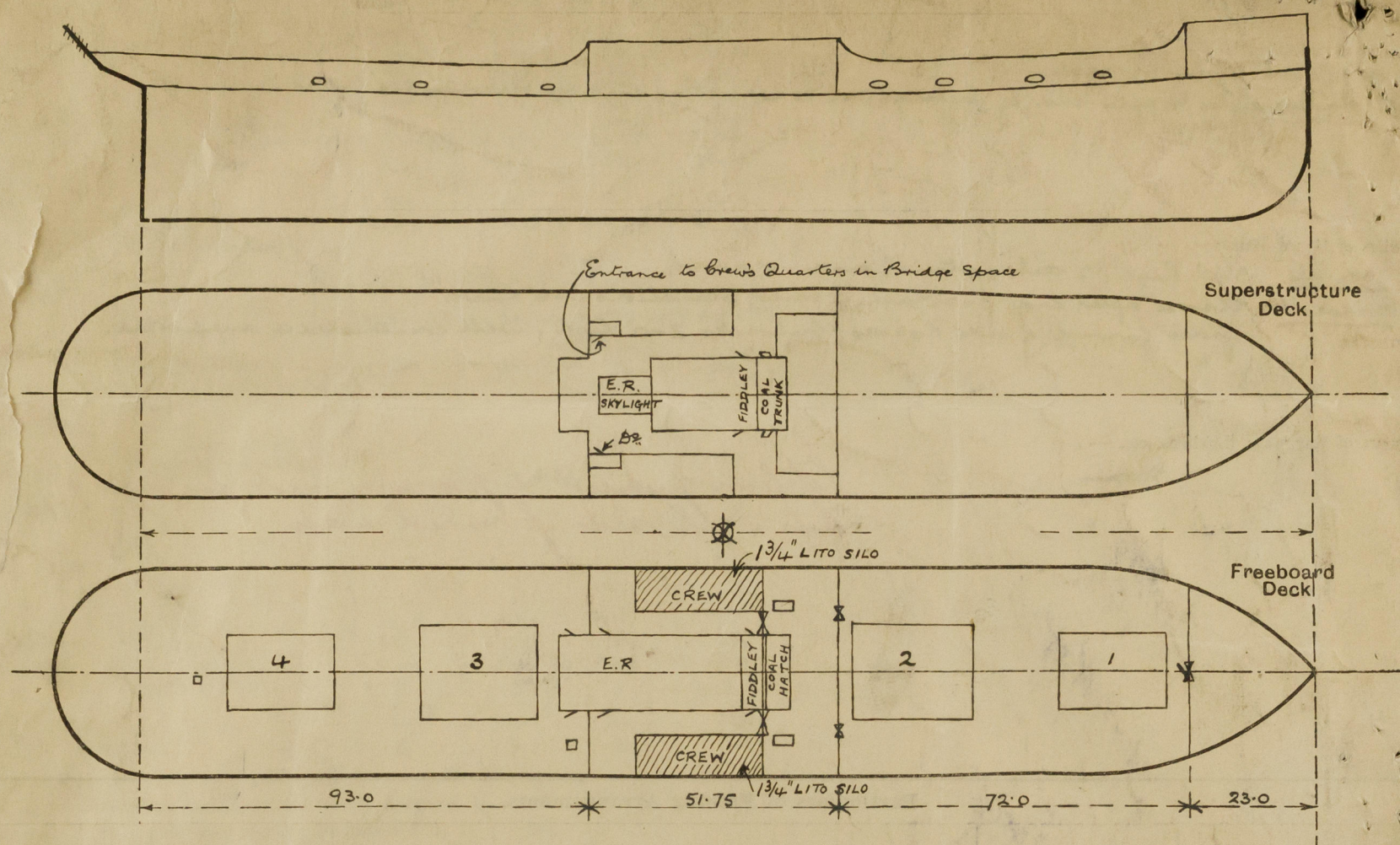
	+	-
Depth Correction ...	9.81	✓
Deduction for superstructures ...	✓	5.51
Sheer correction ...	1.47	✓
Round of Beam correction ...	✓	.06
Correction for Thickness of Deck amidships ...	✓	✓
Other corrections, scantlings, etc. ...	✓	✓
	11.28	5.57

Summer Freeboard = **37.54**SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:— **3'-1½"**

Tropical Fresh Water Line above Centre of Disc ...
Fresh Water Line " " ...
Tropical Line " " ...
Winter Line below " " ...
Winter North Atlantic Line " " ...

Tropical Fresh Water Freeboard ...
Fresh Water " " ...
Tropical " " ...
Winter " " ...
Winter North Atlantic " " ...

Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shewn on the following sketches:—



State any special features in the construction of the ship:—

Small hatches:—

E+B. Casings Top. One 6'-8" x 13'-9", 12" x 30 coaming, 2 1/2" covers F+ A. on 3" rests, cleats 24", 2 tarpaulins.

Upper dk abtft bridge. One hold escape 1'-7 1/2" x 1'-9 1/2", 19" x 34 coaming, 2 1/2" cover F+ A. on 2" rests, cleats 12", 2 tarps.
One to A.P. tank 1'-4" x 1'-4", 10" x 24 coaming, hinged W.T. steel cover secured by 3 hinged bolts & butterfly nuts.

Bridge space. One 5'-0" x 13'-11", 30" x 40 coaming, 2 1/2" covers F+ A. on 2 1/2" x 3" rests, cleats 24", 1 tarp.
Two 4'-2" x 2'-0", 9 1/2" x 3 1/2" x 50 " , 2 1/2" " athwart on 3" rests, cleats 20", 1 tarp.

From D.W. scale:—

<u>Draught</u>	<u>D.W.</u>	<u>T. per I.</u>
18'-9"	2470	17.5
18'-6"	2420	
18'-0"	2310	
17'-6"	2195	
17'-0"	2090	17.25

The vessel has been measured afloat while laid up.

Builder's name and yard number

Names of sister ships

Owners Melrose Abbey Shipping Co. Ltd. (Frederick Jones & Co. Mgrs).

Fee £ 8 : 10 : 0

Received by me



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