

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having Loop Bridge & forecastle
(Type of Superstructures.)

Port of Survey Newcastle on Tyne
Date of Survey 10 March 1932
Name of Surveyor A. G. Akster
Particulars of Classification +100 A-1
Carrying petroleum in bulk

Ship's Name <u>LUXOR</u> <u>U.S. Navy Class C.S.</u>	Nationality and Port of Registry <u>British</u> <u>Liverpool</u>	Official Number <u>161141</u>	Gross Tonnage <u>6554</u>	Date of Build <u>1930-2</u>
Moulded Dimensions: Length <u>430.0</u> Breadth <u>56.25</u> Depth <u>32.75</u> ✓				
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>15027</u> ✓ tons				
Coefficient of fineness for use with Tables <u>.781</u> ✓				

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <u>32.75</u> ✓	(a) Where D is greater than Table depth (D - Table depth) R = <u>(32.81 - 28.67) × 3 = +12.42</u>	Moulded Breadth (B) <u>56.25</u>
Stringer plate <u>.06</u> ✓	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{56.25 \times 12}{50} = 13.50$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <u>14</u>
Depth for Freeboard (D) = <u>32.81</u>		Difference <u>.50</u>
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.50}{4} \times \left(1 - \frac{43.11}{43.11} \right) = -.07$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	<u>106.2</u>	<u>106.20</u>	<u>7.5</u>		<u>106.20</u>
" overhang	<u>4.0</u>	<u>2.00</u>			<u>2.00</u>
R.Q.D. enclosed					
" overhang			<u>7.82</u>		
Bridge enclosed	<u>34.0</u>	<u>34.00</u>	<u>7.5</u>		<u>34.00</u>
" overhang aft					
" overhang forward			<u>7.82</u>		
Forecastle enclosed	<u>39.82</u>	<u>39.82</u>	<u>7.5</u>		<u>39.82</u>
" overhang	<u>3.68</u>	<u>3.37</u>			<u>3.37</u>
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	<u>187.70</u>	<u>185.39</u>			<u>185.39</u>

Standard Height of Superstructure 7.5
" " R.Q.D. ✓
Deduction for complete superstructure 42
Percentage covered $\frac{S}{L} = \frac{185.39}{43.11} = 43.11$
" $\frac{S_1}{L} = \frac{185.39}{43.11} = 43.11$
" $\frac{E}{L} = \frac{185.39}{43.11} = 43.11$
Percentage from Table, Line A.
(corrected for absence of forecastle (if required))
Percentage from Table, Line B: Tanker 34.11
(corrected for absence of forecastle (if required))
Interpolation for bridge less than 2L (if required)
Deduction = 42.00 × 34.11 = -14.33

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	Mean actual sheer aft = Deficient	Mean standard sheer aft
A.P.	<u>53.00</u>	1		<u>53.00</u>	<u>48.0</u>	<u>48.00</u>	1		<u>48.00</u>		
1/4 L from A.P.	<u>23.58</u>	4		<u>94.32</u>	<u>19.75</u>	<u>19.75</u>	4		<u>79.00</u>	Mean actual sheer forward = Deficient 97.97% ✓	Mean standard sheer forward
1/2 L "	<u>5.83</u>	2		<u>11.66</u>	<u>4.92</u>	<u>4.92</u>	2		<u>9.84</u>		
Amidships	✓	4		✓	✓	✓	4		✓		
3/4 L from F.P.	<u>11.66</u>	2		<u>23.32</u>	<u>11.23</u>	<u>11.23</u>	2		<u>22.46</u>	Length of enclosed superstructure forward of amidships = } Tanker	
1/4 L "	<u>47.17</u>	4		<u>188.68</u>	<u>45.03</u>	<u>45.03</u>	4		<u>180.12</u>	" " aft of " = } does in	
F.P.	<u>106.00</u>	1		<u>106.00</u>	<u>108.0</u>	<u>108.00</u>	1		<u>108.00</u>	Sheer forward	
Total				<u>476.98</u>					<u>447.42</u>	Actual	Standard
										<u>11.23</u> 3 <u>33.69</u> <u>11.66</u> 3	
										<u>45.03</u> 3 <u>135.09</u> <u>47.17</u> 3	
										<u>108.00</u> 1 <u>108.00</u> <u>106.00</u> 1	
										<u>276.78</u>	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{29.56}{18} \times \left(.75 - \frac{.2182}{2} \right) = +.87$
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.

Depth to Freeboard Deck = 32.81 ✓
Summer freeboard = 6.17 ✓
Moulded draught (d) = 26.64

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.66 = 6 3/4 ✓
Addition for Winter North Atlantic Freeboard (if required) = 4.30 = 4 1/4 ✓

Deduction for Fresh Water.

Displacement in salt water at summer load water line
 $\Delta = 14447$
Tons per inch immersion at summer load water line
 $T = 49.1$

Deduction = $\frac{\Delta}{40T}$ inches = 7.36
= 7 1/4

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient .781 + .68 1.36

	+	-
Depth Correction	<u>12.42</u> ✓	
Deduction for superstructures		<u>14.33</u> ✓
Sheer correction	<u>.87</u> ✓	
Round of Beam correction		<u>.07</u> ✓
Correction for Thickness of Deck amidships		✓
Other corrections, scantlings, etc.		✓
	<u>13.29</u>	<u>14.40</u>
Summer Freeboard		

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

Tropical Fresh Water Line above Centre of Disc 14 ✓
Fresh Water Line " " 7 1/4 ✓
Tropical Line " " 6 3/4 ✓
Winter Line below " " 6 3/4 ✓
Winter North Atlantic Line " " 11 ✓

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

12 APR 1932

10m.2.31

MARKING FORM

12 APR 1932

MARKING FORM

12 APR 1932

RECEIVED

Lloyd's Register Foundation

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway	No. 1 fore	No. 2 fore	No. 3 fore	No. 4 fore	No. 5 fore	No. 6 fore	No. 7 fore	No. 8 fore	No. 9 fore	No. 10 fore
Dimensions of Hatchway	9' x 12'	7' x 4'	6' x 4'	4' x 2-1'	3' x 2-4'	2' x 1-6'	2' x 2'	4' x 2-9'	2' x 2-9'	3' x 2-3'
COAMINGS	Height above Deck	2-6	9 x 3 1/2 x .45	3-0	9 x 3 1/2 x .40	2-6	9 x 3 x .40	2-6	2-6	2-6
	Thickness	4-4	5	4-0	5	3-0	5	4-4	4-4	4-4
	Sides	6 x 3 x .40	5	One vertical	5	5	5	5	5	5
	Stiffeners	7 x 3 x .40	5	One vertical	5	5	5	5	5	5
HATCH BEAMS	Brackets, Stays	nil	5	5	5	5	5	5	5	5
	Number	3	3	3	3	3	3	3	3	3
	Spacing	30"	30"	30"	30"	30"	30"	30"	30"	30"
	Scantling and Sketch	30"	30"	30"	30"	30"	30"	30"	30"	30"
FORE AND AFTERS	Bearing Surface	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel
	Number	3	3	3	3	3	3	3	3	3
	Spacing	30"	30"	30"	30"	30"	30"	30"	30"	30"
	Unsupported Lengths	30"	30"	30"	30"	30"	30"	30"	30"	30"
HATCH COVERS	Scantling* and Sketch	30"	30"	30"	30"	30"	30"	30"	30"	30"
	Bearing Surface	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel
	Material	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel
	Thickness	30 plates	70	50	50	50	50	50	50	50
Spacing of Cleats	How fitted	5 x 3 x .40	0-7	0-7	0-7	0-7	0-7	0-7	0-7	0-7
	Bearing Surface	5 x 3 x .40	0-7	0-7	0-7	0-7	0-7	0-7	0-7	0-7
	Number of Taraulins	2	2	2	2	2	2	2	2	2
	Are lashings provided in accordance with rule requirements?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Particulars of fiddle, funnel and ventilator coamings:—

Fiddle, funnel Ventilators in efficient Condition.

Engine skylight of steel strongly constructed.

Particulars of Flush Bunker Scuttles:—

Particulars of Companionways:—

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—

No.	Position	Size	Material
1	Forecastle deck	8' dia.	Coaming
2	"	6"	"
3	"	15"	"
4	"	6"	"
5	upper deck	15"	"
6	"	6"	"
7	"	15"	"
8	"	12"	"
9	"	8"	"

- Store room
- Deep tank
- twendeck
- Cofferdams & deep tank
- fore Hold
- Pump Room
- oil bunker

All Ventilators are constructed in accordance with the Rules & Coamings closed with wood plugs and Canvas Covers.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—

No.	Position	Size	Material
1	C.I. air pipe on forecastle deck	18" high x 3" dia.	from fore peak tank
2	C.I. " " upper	18" " " " "	from Cofferdams
3	C.I. " " Poop	18" " " " "	Double bottom tanks & after peak

Pipes closed by Canvas Covers.

Particulars of Gangway Cargo and Coaling Ports:—

none



© 2021 Lloyd's Register Foundation

Particulars of Side Scuttles:

Side scuttles to crew space, Bridge store rooms, and engineers' quarters are provided with hinged deadlights. ✓

Two 10" scuttles in bridge front, $\frac{1}{2}$ " glass, without deadlights. ✓

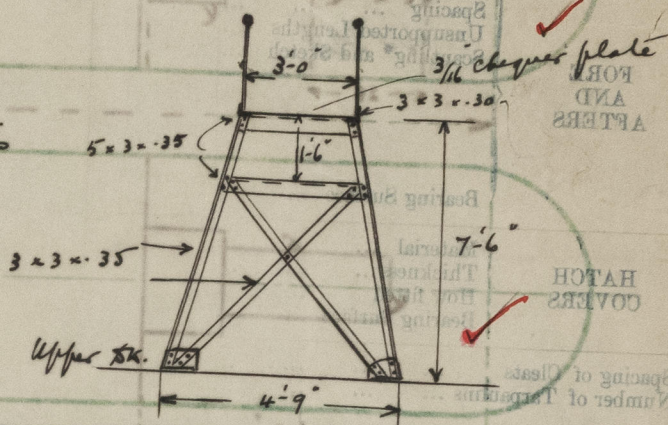
Particulars of Guard Rails :—

Rails:—

Quart Rails on upper Deck	3'-9" high	having 3 rods	Stanchions	5 ft. apart.
Quart rails on poop & T'cle Decks	3'-6"	"	"	"
Bulwark plating on bridge	30" thick	3'-9" high		efficiently stiffened.

Particulars of Gangways, Lifelines, etc. :—

Gangways fitted from Yoop to bridge, and bridge
 to tide, efficiently supported, having stanchions
 3 ft high, 5 ft. apart & wire each side.
 Angle supports 6' to 8' apart,
 no fore & aft diagonals

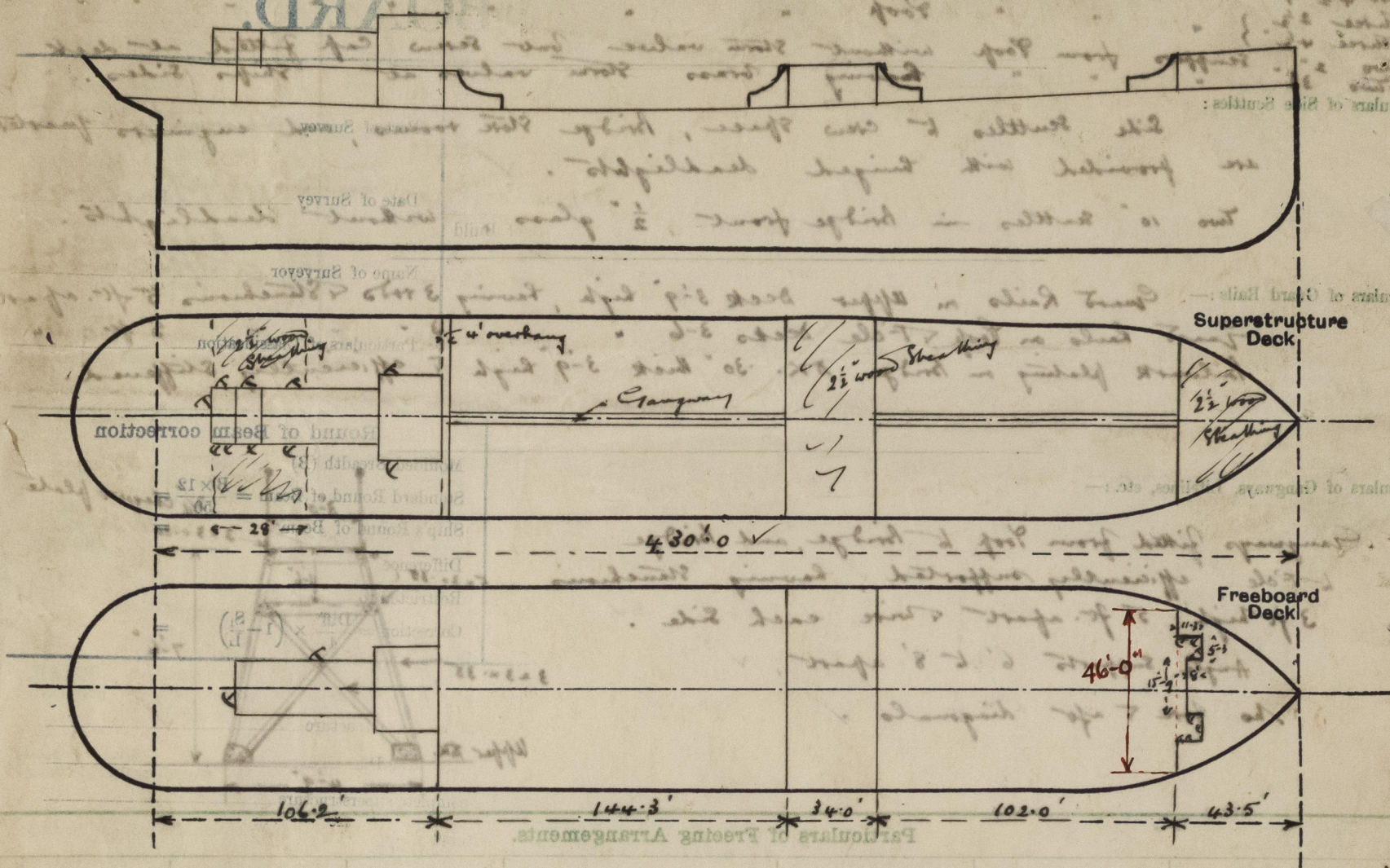


Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well	} 16 ft. lengths only at Loop, Bridge		Constructed, no openings Open rails between	✓ F'dle ✓	3'-9" high	✓ efficient
Forward Well						
State position of each freeing port (F. and A. position and height above deck edge) } After Well:— } Forward Well:— State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Additional area where sheer is less than standard.						

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	✓	.49 ✓	9 x 3 x 3 = .52 ✓ scap'd to 4 x 3 = .34	33" ✓	Brackets at bottom ✓	2 @ 5' x 4' ✓	18" ✓	7'-6" ✓
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead	✓	.25 ✓	3 x 2 1/2 x .30 ✓	33" ✓	Buts. at sk. loughs. ✓	2 @ 5' x 4' ✓	18" ✓	7'-6" ✓
Bridge, Forward Bulkhead	✓	.49 ✓	9 x 3 x 3 = .52 ✓	33" ✓	Brackets ✓	1 @ 4'-9" x 3' ✓	18" ✓	7'-6" ✓
Forecastle Bulkhead	✓	.25 ✓	3" fl. / 4" ✓	36" ✓		8 @ 4'-9" x 2' ✓ off baggage ways	18" ✓	7'-6" ✓
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓							
Exposed Machinery Casings on Super-structure Decks30 ✓	.30 ✓	3 x 3 x .30 ✓	27" ✓	Buts. + alternate rigging at top ✓	10 @ 4'-9" x 2' ✓	18" ✓	7'-6" ✓ 5' 12"-9"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances30 ✓	.26 ✓	3 x 2 1/2 x .30 ✓	27" ✓		2 @ 4'-9" x 2' ✓	18" ✓	7'-6" ✓
Deckhouses on Flush Deck Ships ...	✓							

Particulars				Closing Appliances (state if capable of being manipulated from both sides).
Poop Bulkhead	Two plates .25" thick fastened with hook bolts (13 1/2" apart) through door & hooking over stiffener; also wood shifting boards in permanent channels full height.
Raised Quarter Deck Bulkhead	Two plates .25" thick fastened with hook bolts (13 1/2" apart) through door & hooking over stiffener; also wood shifting boards in permanent channels full height.
Bridge, After Bulkhead	One W.T. Steel door operated from <u>both sides</u> outside only.
Bridge, Forward Bulkhead	4 Steel & 4 wood doors operated from both sides.
Forecastle Bulkhead	Steel or wood doors / operated from both sides.
Exposed Machinery Casings on Free-board or Raised Quarter Decks	Steel doors operated from both sides.
Exposed Machinery Casings on Super-structure Decks	Steel doors operated from both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	Steel doors operated from both sides.
Deckhouses on Flush Deck Ships	

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:—

Tons per inch

24 ft. Bk. 48.21
25 — 48.43
26 — 48.65

28'-0" = 15123 tons
27'-0" = 14535
26'-0" = 13950

T.P.I.

49.12
48.88
48.65

See out
ship
LUCULUS
33032

Height of Bulkhead	Length of Bulkhead	Area of Bulkhead	Volume of Bulkhead	Weight of Bulkhead
43.50	43.50	1893.75	1893.75	1893.75
43.00	43.00	1849.00	1849.00	1849.00
42.50	42.50	1806.25	1806.25	1806.25
42.00	42.00	1764.00	1764.00	1764.00
41.50	41.50	1722.25	1722.25	1722.25
41.00	41.00	1681.00	1681.00	1681.00
40.50	40.50	1640.25	1640.25	1640.25
40.00	40.00	1600.00	1600.00	1600.00
39.50	39.50	1560.25	1560.25	1560.25
39.00	39.00	1521.00	1521.00	1521.00
38.50	38.50	1482.25	1482.25	1482.25
38.00	38.00	1444.00	1444.00	1444.00
37.50	37.50	1406.25	1406.25	1406.25
37.00	37.00	1369.00	1369.00	1369.00
36.50	36.50	1332.25	1332.25	1332.25
36.00	36.00	1296.00	1296.00	1296.00
35.50	35.50	1260.25	1260.25	1260.25
35.00	35.00	1225.00	1225.00	1225.00
34.50	34.50	1190.25	1190.25	1190.25
34.00	34.00	1156.00	1156.00	1156.00
33.50	33.50	1122.25	1122.25	1122.25
33.00	33.00	1089.00	1089.00	1089.00
32.50	32.50	1056.25	1056.25	1056.25
32.00	32.00	1024.00	1024.00	1024.00
31.50	31.50	992.25	992.25	992.25
31.00	31.00	961.00	961.00	961.00
30.50	30.50	930.25	930.25	930.25
30.00	30.00	900.00	900.00	900.00
29.50	29.50	870.25	870.25	870.25
29.00	29.00	841.00	841.00	841.00
28.50	28.50	812.25	812.25	812.25
28.00	28.00	784.00	784.00	784.00
27.50	27.50	756.25	756.25	756.25
27.00	27.00	729.00	729.00	729.00
26.50	26.50	702.25	702.25	702.25
26.00	26.00	676.00	676.00	676.00
25.50	25.50	650.25	650.25	650.25
25.00	25.00	625.00	625.00	625.00
24.50	24.50	600.25	600.25	600.25
24.00	24.00	576.00	576.00	576.00
23.50	23.50	552.25	552.25	552.25
23.00	23.00	529.00	529.00	529.00
22.50	22.50	506.25	506.25	506.25
22.00	22.00	484.00	484.00	484.00
21.50	21.50	462.25	462.25	462.25
21.00	21.00	441.00	441.00	441.00
20.50	20.50	420.25	420.25	420.25
20.00	20.00	400.00	400.00	400.00
19.50	19.50	380.25	380.25	380.25
19.00	19.00	361.00	361.00	361.00
18.50	18.50	342.25	342.25	342.25
18.00	18.00	324.00	324.00	324.00
17.50	17.50	306.25	306.25	306.25
17.00	17.00	289.00	289.00	289.00
16.50	16.50	272.25	272.25	272.25
16.00	16.00	256.00	256.00	256.00
15.50	15.50	240.25	240.25	240.25
15.00	15.00	225.00	225.00	225.00
14.50	14.50	210.25	210.25	210.25
14.00	14.00	196.00	196.00	196.00
13.50	13.50	182.25	182.25	182.25
13.00	13.00	169.00	169.00	169.00
12.50	12.50	156.25	156.25	156.25
12.00	12.00	144.00	144.00	144.00
11.50	11.50	132.25	132.25	132.25
11.00	11.00	121.00	121.00	121.00
10.50	10.50	110.25	110.25	110.25
10.00	10.00	100.00	100.00	100.00
9.50	9.50	90.25	90.25	90.25
9.00	9.00	81.00	81.00	81.00
8.50	8.50	72.25	72.25	72.25
8.00	8.00	64.00	64.00	64.00
7.50	7.50	56.25	56.25	56.25
7.00	7.00	49.00	49.00	49.00
6.50	6.50	42.25	42.25	42.25
6.00	6.00	36.00	36.00	36.00
5.50	5.50	30.25	30.25	30.25
5.00	5.00	25.00	25.00	25.00
4.50	4.50	20.25	20.25	20.25
4.00	4.00	16.00	16.00	16.00
3.50	3.50	12.25	12.25	12.25
3.00	3.00	9.00	9.00	9.00
2.50	2.50	6.25	6.25	6.25
2.00	2.00	4.00	4.00	4.00
1.50	1.50	2.25	2.25	2.25
1.00	1.00	1.00	1.00	1.00

Builder's name and yard number

Palmer No 994

Names of sister ships

Luculus same Builders No 993

Owners

H.E. Moss & Co's Ltd.

Fee £

Received by me