

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Mch. No. 7612

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey <u>MANCHESTER</u>
having <u>POOP, BRIDGE AND FORECASTLE</u>					Date of Survey <u>15th JULY 1932</u>
(Type of Superstructures.)					Name of Surveyor <u>A.R. Gibbs</u>
Ship's Name <u>ATLANTIAN</u>	Nationality and Port of Registry <u>BRITISH LIVERPOOL</u>	Official Number <u>149686</u>	Gross Tonnage <u>6549</u>	Date of Build <u>1928</u> <u>8.28</u> <u>8 mo</u>	Particulars of Classification <u>+ 100 A1</u>
Moulded Dimensions: Length <u>414.19</u> Breadth <u>54.5</u> Depth <u>36.9 1/2</u>					
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>15300</u> tons					
Coefficient of fineness for use with Tables <u>.759</u>					

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <u>36.79</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(36.82 - 27.61) 3.00 = + 27.63</u>	Moulded Breadth (B) <u>54.5</u>
Plating on exposed deck $T \left(\frac{L-S}{L} \right) =$	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>13.08</u>
Depth for Freeboard (D) = <u>36.82</u>	If restricted by superstructures <input checked="" type="checkbox"/>	Ship's Round of Beam = <u>13 1/2</u>
		Difference <u>42</u>
		Restricted to <u>1</u>
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) =$ <u>$\frac{42}{4} \times .4412 = - .05$</u>

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	<u>41.29</u>	<u>41.29</u>	<u>7'-9"</u>	<input checked="" type="checkbox"/>	<u>41.29</u>	Standard Height of Superstructure <u>7.50</u>
„ overhang ...	<u>N.L.</u>					„ „ R.Q.D. _____
R.Q.D. enclosed ...	<input checked="" type="checkbox"/>					Deduction for complete superstructure <u>42.00</u>
„ overhang ...	<input checked="" type="checkbox"/>					Percentage covered $\frac{S}{L} =$ <u>55.88%</u>
Bridge enclosed ...	<u>150.00</u>	<u>150.00</u>	<u>7'-9"</u>	<input checked="" type="checkbox"/>	<u>150.00</u>	„ „ $\frac{S_1}{L} =$ <u>55.88%</u>
„ overhang aft ...	<u>N.L.</u>					„ „ $\frac{E}{L} =$ <u>55.88%</u>
„ overhang forward ...	<u>N.L.</u>					Percentage from Table, Line A. (corrected for absence of forecastle (if required))
F'cle enclosed ...	<u>40.14</u>	<u>40.14</u>	<u>7'-9"</u>	<input checked="" type="checkbox"/>	<u>40.14</u>	Percentage from Table, Line B. <u>41.88%</u> (corrected for absence of forecastle (if required))
„ overhang ...	<u>N.L.</u>					Interpolation for bridge less than .2L (if required)
Trunk aft ...	<input checked="" type="checkbox"/>					Deduction = <u>42.00 x .4188 = - 17.59</u>
„ forward ...	<input checked="" type="checkbox"/>					
Tonnage opening aft ...	<input checked="" type="checkbox"/>					
„ „ forward	<input checked="" type="checkbox"/>					
Total ...	<u>231.43</u>	<u>231.43</u>			<u>231.43</u>	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
P. ...	<u>51.42</u>	1		<u>51.42</u>	<u>51</u>	<u>51.00</u>	1		<u>51.00</u>	Mean actual sheer aft = <u>Deficient</u> (above .75)
from A.P. ...	<u>22.88</u>	4		<u>91.52</u>	<u>22 1/2</u>	<u>22.51</u>	4		<u>90.04</u>	Mean actual sheer forward = <u>Excess</u>
„ ...	<u>5.66</u>	2		<u>11.32</u>	<u>5 1/2</u>	<u>5.62</u>	2		<u>11.24</u>	
amidships ...		4		<u>0</u>	<u>0</u>	<u>0</u>	4		<u>0</u>	Length of enclosed superstructure forward of amidships =
from F.P. ...	<u>11.31</u>	2		<u>22.62</u>	<u>11</u>	<u>11.50</u>	2		<u>23.00</u>	„ „ aft of „ =
„ ...	<u>45.77</u>	4		<u>183.08</u>	<u>46</u>	<u>46.01</u>	4		<u>184.04</u>	
P. ...	<u>102.84</u>	1		<u>102.84</u>	<u>102</u>	<u>102.00</u>	1		<u>102.00</u>	
Total ...				<u>462.78</u>					<u>461.32</u>	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{1.46}{18} (.75 - .2794) = + .04$

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.	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta =$ <u>14288</u> TONS Tons per inch immersion at summer load water line $T =$ <u>45.45</u> Deduction = $\frac{\Delta}{40 T}$ inches $=$ <u>7.85</u> = <u>7 3/4</u>	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{.68 + .759}{1.36} = \frac{1.439}{1.36}$ Depth Correction <u>27.63</u> Deduction for superstructures <u>17.59</u> Sheer correction <u>.04</u> Round of Beam correction <u>.05</u> Correction for Thickness of Deck amidships Other corrections, scantlings, etc. Summer Freeboard = <u>90.38</u>	<u>75.94</u> <u>80.35</u> <u>g.m.m.</u> <u>20-7-32</u> <u>+ 10.03</u> <u>90.38</u>
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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 ...	<u>15</u>	Tropical Fresh Water Freeboard ...	<u>6'-3 1/2</u>
Fresh Water Line „ „ ...	<u>7 1/4</u>	Fresh Water „ „ ...	<u>6'-10 3/4</u>
Tropical Line „ „ ...	<u>7 1/4</u>	Tropical „ „ ...	<u>6'-11 1/4</u>
Winter Line below „ „ ...	<u>7 1/4</u>	Winter „ „ ...	<u>8'-1 1/4</u>
Winter North Atlantic Line „ „ ...		Winter North Atlantic „ „ ...	

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS											S.S. DECK									
Freeboard Deck.																				
Description of Hatchway	No.1.	No.3	No.4 No.5	HATCH TO TRUNKWAY TO FORE PEAK STORE	HATCH TO CHAIN LAR	HATCH IN AFT WELL TO COLD CHAM.	TRUNKWAY TO TUNNEL ESC	HATCH TO LAZARETTE IN STEERING GEAR HOUSE	FOCLE. DE. HATCH TO FORE PEAK	BRIDGE DE. No.3 H.								
Dimensions of Hatchway	20'-3" x 14'-0"	30'-0" x 16'-0"	27'-6" x 16'-0"	3'-6" x 2'-6"	2'-6" x 3'-0"	2'-6" x 3'-6"		3'-10" x 3'-3"	4'-6" x 3'-6"	12'-6" x 19'-0"								
COAMINGS	{	Height above Deck	30"	30"	30"	STEEL	3 x 3 x 3 L	30"	STEEL	6 x 3 1/2 L	26"	34"								
		Thickness { Sides	44	44	44	TRUNKWAY	✓	40	TRUNK	✓	40	44								
		Ends	44	44	44		✓		FROM	✓		44								
		Stiffeners	7 x 3 L Sides	7 x 3 L	7 x 3 L	3'-6"	✓	✓	POOR	✓	✓	7 x 3 L								
		Brackets, Stays	2 x 2 1/2 Rys.	2 x 2 1/2 Rys.	3 x 2 1/2 Rys.	None	✓	✓	DECK	✓	✓	NONE								
HATCH BEAMS	{	Number	3	4	4	SEE SKETCH ON BACK.						1								
		Spacing	5'-1"	6'-0"	5'-6"								6'-3"							
		Scantling and Sketch	T L	3 x 3 x 42	3 1/2 x 3 x 42									3 1/2 x 3 x 42	NONE	NONE	NONE	NONE	NONE	4 x 3 x 44
				13 x 37	16 x 36									15 x 36	NONE	NONE	NONE	NONE	45 x 38	
			6 x 3 x 60	6 x 3 x 60	6 x 3 x 60							6 1/2 x 3 x 65								
		Bearing Surface	3"	3"	3"							3'								
FORE AND AFTERS	{	Number				No FORE AND AFTERS FITTED														
		Spacing																		
		Unsupported Lengths																		
		Scantling* and Sketch																		
		Bearing Surface																		
HATCH COVERS	{	Material	W.P.			HINGED	W.P.	HINGED	HINGED	W.P.	HINGED	W.P.								
		Thickness	3"			STEEL	3'	STEEL	STEEL	3"	STEEL	3"								
		How fitted	F.E.A.			DOOR	T.	N.T.	DOOR	T.	N.T.	F.E.A.								
		Bearing Surface	3"			OPERATED	2 1/2"	COVER	OPERATES	2 1/2"	COVERS.	3"								

Particulars of fiddley, funnel and ventilator coamings:—

Stanchion Gratings covered by Strong Hinged Steel Covers.
Funnel and Fiddle Vents in good condition.
E. R. Skylight of Steel strongly constructed.

Particulars of Flush Bunker Scuttles:—

None.

Particulars of Companionways :—

Particulars of Companionways :—
 3 Strong Steel Skylights on Roof Deck leading to Accommodation below with Strong
 hinged wood flaps each provided with a canvas cover which is lashed into position.
 2 Strong Steel Companionways on Bridge Deck with Strong hinged wood doors 5'5" x 24" - 7" Sills - operate from
 both sides.

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

Peep On:-

13	verts.	6	dia	34	35	to	Crew Spaces
2	"	9	"	33	35	"	Steering Gear
5	"	13	"	33	35	to	Crew Spaces
3	"	18	"	34	35	"	

Orange Neck
 2 Vents. 14 dia. x 27 x 40 to Hols.
 3 " 18 " x 27 x 40 " Hols & Alleysay
 1 " 18 " x 34 x 35 " Tr. D^{ns}
 2 " 12 " x 34 x 35 " "
 2 " 12 " x 31 x 35 " E.R.
 2 " 12 " x 33 x 35 " Pannus & Tr. D^{ns}

Particulars of Air Pipes in exposed positions on freeboard, raised
Forecastle Deck:-
1 air pipe to Fore Peak 4" dia x 15" to mouth
1 " " No 1 D.B. 3" x 14" "
Fore Well No.:-
1 air pipes to No. 2 D.B. 3" x 15" to mouth
In Bridge Space in alleyways.
2 air pipes to No. 3 D.B. 3" x 14" to mouth
2 A.C.F. " " 3" x 15" "
2 air " " 3" aff 3" x 22" "
2 " " B.R. Tank 3 1/2 x 12"

Particulars of Gangway Cargo and Coaling Ports:—

4 openings for Ash Shoot each 1'-6" x 1'-4" - 12" above deck closed by Strong Hinged Steel Doors secured from inside by clamps.

Flocks 74:-
3 G.N. Vult. to Free Pear Stones 4 1/2 dia x 8 1/2 to mouth
3 Vulturinos to holes in wood 18 x 36 x 40.

FORE WELL:
2 vents. 18" dia x 36" coaming x .35 to HOLES (Specialty Supports)
2 " 18" " 11'-2" " .35

AFTER WELL:-
4 runs 18' dia x 11'-0" x .40 (Specially Supported)
 x 10' x 36" x .4

2 " 18 " x 36 " 7
2 G.N. Vents. 9" dia. x 36 " 70 MOUTH
1 " 6 " x 41 " " "

er, or superstructure decks :—

In bridge space in alleyways
Two pipes to L. R. D. B. $3\frac{1}{2} \times 18\frac{1}{2}$ To house
(Through casing)

2 A.E.F. - E.N. 3 - 115 to mouth
In after well.
3 air pipes to No. 6 - 3" dia. x 14" To mouth

2 Deep Hawk 9 1/2 x 36
2 6-9 x 14
3 A & F No. 7 Hawk 3 x 14

On poop Dr.
1 an pipe to after peak 4' dia. x 15' to keelson

All ventilators
are strongly
constructed and
are closed by
wood plugs and
canvas covers.

no snuffing holes drilled
no ^{efficient} means of closing
noises.

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Particulars of Scuppers and Sanitary Discharge Pipes —

N.C. discharges and Suffers from minor ...
it has storm valves at Ship's Side.

W.C. discharges from enclosed poop keel overboard about 4'-0" below hullboard deck and is fitted with brass stem valves at Ship's Side.

Particulars of Side Scuttles :

Particulars of Side Scuttles:

Side Scuttles in Forecastle	all of Strong construction and are fitted with permanent hinged deadlights
" " " Poop	" " " " - no permanent hinged deadlights
" " " Bridge	" " " " - no deadlights

Particulars of Guard Rails :—

Particulars of Guard Rails :—
The rails are 3' 6" high - Stanchions 4'-8" apart.

Bridge: Rails 4 per 3-10

Rails 3 Juv 3-11

Strong Steel Bulwarks are built in well decks 3'-8" high and supported by Stays 6" B.P. and by 2" Round Stays in way of Gangway Doors 5'-0" to 6'-0" apart.

Particulars of Gangways, Lifelines, etc. :—

~~NONE.~~

Suitable provision made for rigging
lifelines which are available for use in any
part of the ship which may have to be used
by the crew in the regular working of the ship.

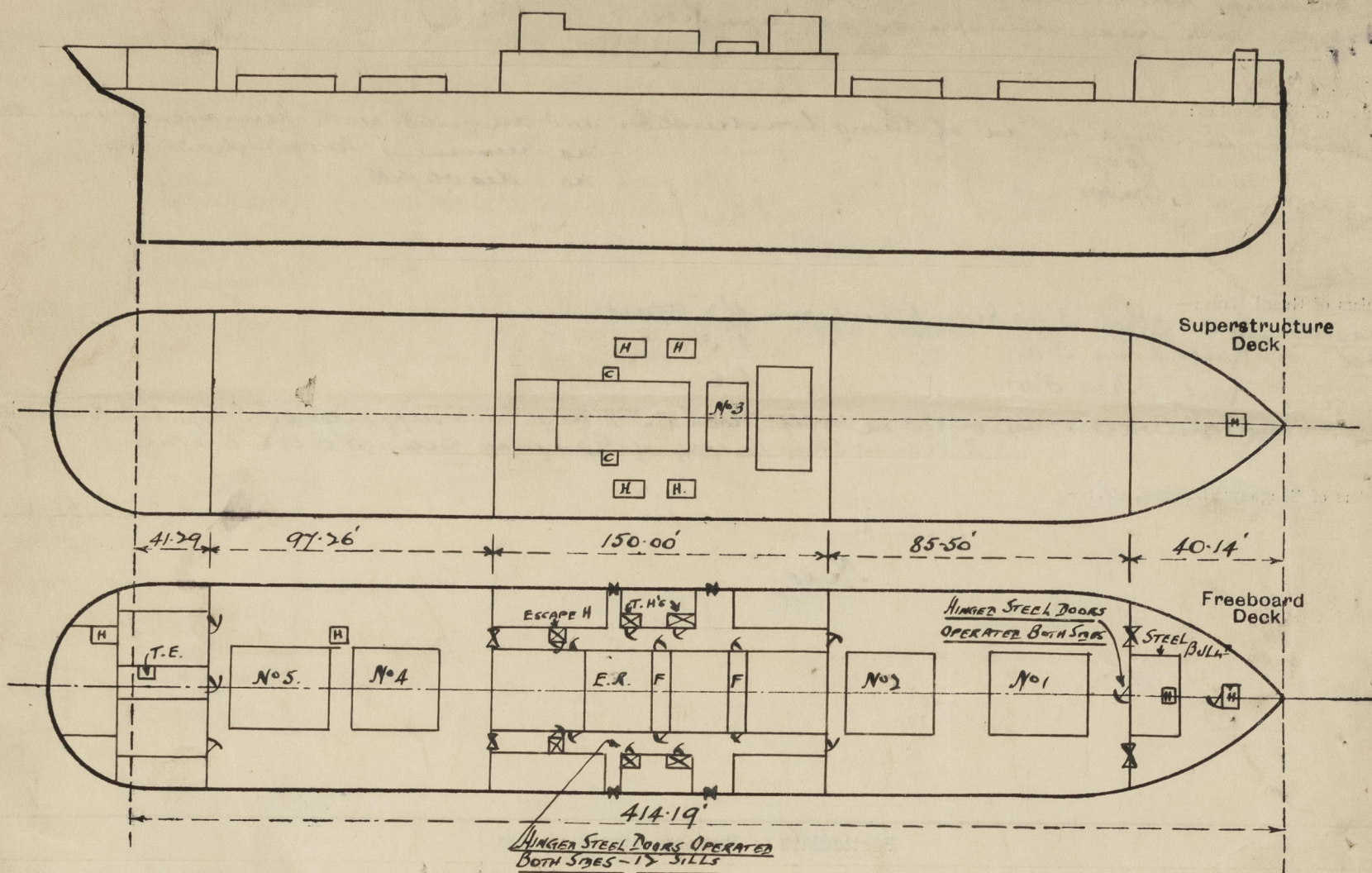
Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well	94'-3"	3'-8"	3'-9" x 1'-9" - 4 OFF 3'-6" x 9" - 1 OFF (OPENING FOR FAIRLEAD) 16 ABOVE DECK EDGE	5	262 + 26.25 $\frac{\text{sq ft}}{4}$ = 29.9 $\frac{\text{sq ft}}{4}$	19 $\frac{1}{2}$ $\frac{\text{sq ft}}{4}$
Forward Well	85'-6"	3'-8"	2'-9" x 1'-9" - 4 OFF 3'-6" x 9" - 1 OFF (OPENING FOR FAIRLEAD 16 ABOVE DECK EDGE)	5	19.25 + 26.2 = 21.87 $\frac{\text{sq ft}}{4}$	17.1 $\frac{\text{sq ft}}{4}$
<p>State position of each freeing port { After Well:— From BULWARK $\frac{1}{2}$ DECK EDGE 59'-0" (FAIRLEAD) 64'-9" 91'-0" } 12' above deck.</p> <p>(F. and A. position and height above deck edge) { Forward Well:— " " " 41'-9" 53'-6" 59'-6" (FAIRLEAD) 99'-0" }</p> <p>State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Freeing ports in after well have 4 vert. bars each</p> <p style="text-align: center;">" " " Fore " " 3 " " "</p>						
Additional area where sheer is less than standard.						

Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	40	35	6 x 3 x 40 L	30 to 36	As TOP AND BOTTOM.	5'-0" x 2'-3"	19"	4'-9"
Raised Quarter Deck Bulkhead ...				✓				
Bridge, After Bulkhead	✓	30	3½ x 3 x 34	30	NONE	5'-6" x 4'-0"	18"	4'-9"
Bridge, Forward Bulkhead	45	36	1 x 3 x 52 BA	30	Lugged	4'-11" x 2'-4½"	17"	4'-9"
Forecastle Bulkhead	✓	25	3½ x 3 x 40	30	NONE	5'-6" x 3'-6"	17"	4'-9"
Trunk, Aft				✓				
Trunk, Forward				✓				
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...								
Exposed Machinery Casings on Super-structure Decks	35	35	4 x 3 x 35	27	BRACKETS TOP	NONE	✓	4'-9 to 7'-9"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	35	30	4 x 3 x 35	27	BRACKETS TOP	2-5'-0" x 5'-0" F.F. 2-5'-0" x 5'-0" A.F. 2-5'-0" x 5'-0" E.R.	18	4'-9"
Deckhouses on Flush Deck Ships ...				✓				

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	Strong Anger Steel Doors operated from both sides ✓
Raised Quarter Deck Bulkhead ...	✓
Bridge, After Bulkhead	3" S.β's full height in Rivel's channels ✓
Bridge, Forward Bulkhead	Anger Steel W.T. doors operates from both sides ✓
Forecastle Bulkhead	3" Shipping Boards full height in Rivel's Channels ✓
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓
Exposed Machinery Casings on Super-structure Decks	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	Anger Steel Doors operates from both sides ✓
Deckhouses on Flush Deck Ships ...	✓

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 shown on the following sketches:—



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

VESSEL SURVEYED ABOARD FOR CONVENTION FREEBOARD PURPOSES ONLY.

Δ AT S.H.D. 29'-4" = 14240 TONS.

T.P.I. = 45.45 TONS.

Δ AT 28'-10 1/2" = 14000 "

" = 45.42 "

" " 27'-11 1/2" = 13600 "

" = 45.23 "

" " 27'-0 1/2" = 13000 "

" = 45.01 "

[Handwritten signature]

Builder's name and yard number CALEDON S.B. & ENG CO. LTD DUNDEE No. 316.

Names of sister ships ✓

Owners F. LEYLAND & CO. LTD

Rec £ 14 : 9 : 0. Received by me



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