

Rpt. C.11.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Poop, Bridge & ForecastlePort of Survey HongkongDate of Survey June 1st 7th 15th 20th 21st + 27-1932.

(Type of Superstructures.)

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<u>FRANCOL</u>	<u>British</u> <u>London</u>	<u>140441</u>	<u>2607</u>	<u>1917</u> <u>-12</u>

Name of Surveyor J. H. Morrison

Moulded Dimensions: Length 320.0 Breadth 41.33 Depth 25.5
 Moulded displacement at moulded draught = 85 per cent. of moulded depth 5400 tons
 Coefficient of fineness for use with Tables 68 lowest table

Particulars of Classification +100 A1
For Government Services
Carrying petroleum in Bulk
S.S. 24 K₂ N° 3 - 6.30

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	<u>25.50</u>	(a) Where D is greater than Table depth (D-Table depth) R =		Moulded Breadth (B)	<u>41.33</u>
Stringer plate	<u>4.4</u>	<u>(25.54 - 21.38) 2.461 = 1036</u>		Standard Round of Beam = $\frac{B \times 12}{50}$	<u>9.92</u>
Sheathing on exposed deck ✓		(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Ship's Round of Beam	<u>10.5</u>
$T \left(\frac{L-S}{L} \right) =$		If restricted by superstructures		Difference	<u>.58</u>
Depth for Freeboard (D) =	<u>25.54</u>			Restricted to	<u>58</u>
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$	<u>4</u> <u>- .06</u>

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>46.18</u>	<u>46.18</u>	<u>8'-0"</u>		<u>46.18</u>
" overhang ...	✓				
R.Q.D. enclosed ...	✓				
" overhang ...	✓				
Bridge enclosed...	<u>106.18</u>	<u>106.18</u>	<u>8'-0"</u>		<u>106.18</u>
" overhang aft ...	✓				
" overhang forward	✓				
Fore enclosed <u>apw. 11</u>	<u>32.00</u>	<u>25.63</u>	<u>8'-0"</u>		<u>25.63</u>
" overhang ...	<u>7.5</u>	<u>3.75</u>			<u>3.75</u>
Trunk aft ...	✓				
" forward ...	✓				
Tonnage opening aft ...	✓				
" forward	✓				
Total ...	<u>191.86</u>	<u>181.74</u>			<u>181.74</u>

Standard Height of Superstructure 6.7

" " R.Q.D. ...

Deduction for complete superstructure 36.67Percentage covered $\frac{S}{L} =$ 59.95" $\frac{S_1}{L} =$ 56.79" $\frac{E}{L} =$ 56.79

Percentage from Table, Line A.

(corrected for absence of forecastle (if required))

Percentage from Table, Line B. Yankee 48.47

(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = 36.67 x 48.47 = 17.77

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>42.00</u>	1		<u>42.00</u>	<u>35.00</u>	<u>35</u>	1		<u>35.00</u>
$\frac{1}{2}$ L from A.P. ...	<u>18.69</u>	4		<u>74.76</u>	<u>16.50</u>	<u>14.81</u>	4		<u>59.24</u>
$\frac{2}{3}$ L " ...	<u>4.62</u>	2		<u>9.24</u>	<u>4.75</u>	<u>3.70</u>	2		<u>7.40</u>
Amidships ...		4		<u>0</u>			4		
$\frac{2}{3}$ L from F.P. ...	<u>9.24</u>	2		<u>18.48</u>	<u>9.50</u>	<u>7.55</u>	2		<u>15.10</u>
$\frac{1}{2}$ L " ...	<u>37.38</u>	4		<u>149.52</u>	<u>30.25</u>	<u>30.22</u>	4		<u>120.88</u>
F.P. ...	<u>84.00</u>	1		<u>84.00</u>	<u>66.00</u>	<u>66</u>	1		<u>66.00</u>
Total ...				<u>378.00</u>					<u>303.62</u>

Mean actual sheer aft = Defic

Mean standard sheer aft

Mean actual sheer forward = Defic 80.08%

Mean standard sheer forward

Length of enclosed superstructure forward of amidships =

" " aft of " =

Shear for

9.24	3	27.72	7.55	3	22.65
37.38	3	112.14	30.22	3	90.66
84.00	1	84.00	66.00	1	66.00
		223.86			179.31
					179.31
					223.86 = .8008

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) =$ $\frac{74.38}{18} (75 - 2997) = +1.86$

If limited on account of midship superstructure.

If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 25.54
 Summer freeboard = 3.29
 Moulded draught (d) = 22.25

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 5.56 5 1/2Addition for Winter North Atlantic Freeboard (if required = 3.2 3 1/4

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$ 5610

Tons per inch immersion at summer load water line

 $T =$ 24.6Deduction = $\frac{\Delta}{40T}$ inches= 5.7 5 3/4

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction ... 10.36
 Deduction for superstructures ... 17.77
 Sheer correction ... 1.86
 Round of Beam correction06
 Correction for Thickness of Deck amidships ...
 Other corrections, scantlings, etc. ...

45.1
 45.10
 2-8-32
 12.22 17.83 - 5.61
 Summer Freeboard = 39.49

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Steel, Deck: 3-3 1/2

Tropical Fresh Water Line above Centre of Disc ... 1 1/4
 Fresh Water Line " " ... 5 3/4
 Tropical Line " " ... 5 1/2
 Winter Line below " " ... 5 1/2
 Winter North Atlantic Line " " ... 8 3/4

Tropical Fresh Water Freeboard ... 2-4 1/4
 Fresh Water " " ... 2-9 3/4
 Tropical " " ... 2-10
 Winter " " ... 3-9
 Winter North Atlantic " " ... 4-0 1/4

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	No.	Inside Side		On Poop		On Poop			
		Fore Hold	Tanks	Store	Steering Eng. tunnel	Magazine			
Dimensions of Hatchway		6'-6" x 6'-0"	3'-0" x 3'-0"	4'-0" x 4'-0"	3'-1 1/2" x 2'-10"	3'-0" x 3'-0"	2'-6" x 2'-6"		
COAMINGS	Height above Deck	30	30"	18"	21"	27"	16"		
	Thickness	10/20	8/20	8/20	8/20	7/20	7/20		
	Stiffeners	None	None	None	None	None	None		
	Brackets, Stays	None	None	None	None	None	None		
HATCH BEAMS	Number	None	None	None	None	None	None		
	Spacing								
	Scantling and Sketch								
	Bearing Surface								
FORE AND AFTERS	Number	None	None	None	None	None	None		
	Spacing								
	Unsupported Lengths								
	Scantling and Sketch								
HATCH COVERS	Material	Steel plate	Steel plate	Pine	Steel plate	Steel plate	Riveted Steel plate		
	Thickness	8/20	10/20	3"	9/20	10/20	8/20 and manhole		
	How fitted	Suitably	Suitably	F + A	Suitably	Suitably	10" above hatch top		
	Bearing Surface	Stiffened	Stiffened	2 1/2"	Stiffened and fitted with turnbuckles	Stiffened and fitted with turnbuckles	Stiffened and fitted with turnbuckles		
Spacing of Cleats		fitted with turnbuckles	fitted with turnbuckles	27"	fitted with turnbuckles	fitted with turnbuckles	hatch top cover 10" above hatch top		
Number of Tarpaulins		one	one	one	one	one	one		
*Are wood fore and afters steel shod at all bearing surfaces? <input checked="" type="checkbox"/> Are battens and wedges efficient and in good condition? <input checked="" type="checkbox"/> Are tarpaulins in good condition and in accordance with rule requirements? <input checked="" type="checkbox"/> Are lashings provided in accordance with rule requirements? <input checked="" type="checkbox"/>									

Particulars of fiddle, funnel and ventilator coamings:— Storehold gratings covered by strong steel hinged covers. Fiddle & funnel ventilators in efficient condition. Engine room skylight of steel strongly constructed.

Particulars of Flush Bunker Scuttles:— 1- 22" dia. on bridge deck Port side, to galley coal bunker, in bridge space, scuttle of cast iron of substantial construction fitted with bayonet socket & permanent chain attachment.

Particulars of Companionways:— One on poop 4'-0" x 3'-1" x 6'-2" high, plating 1/20, leading to crew's quarters in poop space, door of wood facing aft, 5'-4" x 36", sill 18", operated from both sides. Two on bridge 4'-4" x 3'-0" x 6'-7" high, plating 7/20, leading to pump rooms at fore & aft ends of machinery space, doors of steel forward one facing forward, aft one facing aft, 4'-3 1/2" x 27", sill 24", can be operated from both sides. One on bridge leading to quarters 4'-6" x 3'-0" x 6'-1" high, plating 7/20, door of wood facing Port side 4'-4" x 2'-0" sill 18", can be operated from both sides.

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

On Forecastle:— 1- 10" dia, coaming 36" x 32" to F.P. Store
1- 16" " " 20" x 40" to Fore Hold
3- 6" " " 18" x 25" to fore-castle space (French mushroom type)
on Bridge:— 27- 6" dia, coaming 18" x 25" to cabins, (French mushroom type)

On Poop:— 1- 16" dia, coaming 19" x 40" 8-C.I. goose neck, 16" high x 4" dia. to Photo. Room
2- 9" " " 18" x 32" 2-C.I. " " 11" x 5 1/2" to W. Co.
10- 6" " " 18" x 25"
1- 10" " " 30" x 32" and 3- 8" dia x 30" high coaming 30"

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

on Bridge:— 2- 3" dia. 18" high, to D.B. tanks in engine room
2- 3" " 18" " " F.W. tanks.

All air pipes closed with wood plugs & canvas covers.

Particulars of Gangway Cargo and Coaling Ports:— None



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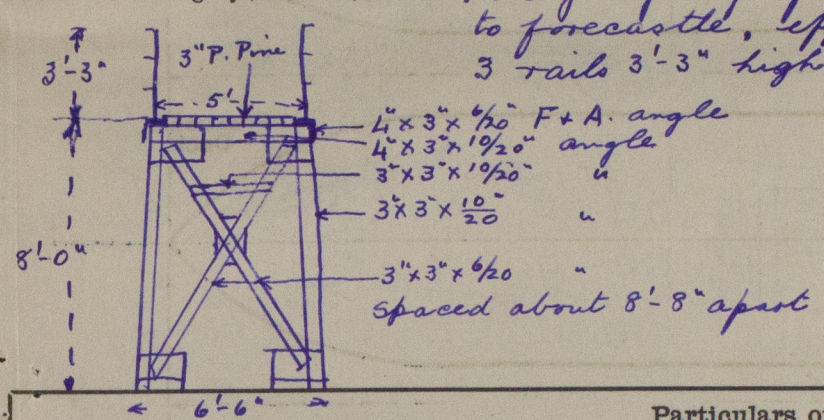
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Particulars of Scuppers and Sanitary Discharge Pipes — all scuppers & sanitary discharge pipes from poop & bridge spaces have gunmetal discharge storm valves on ship's side & efficient traps or wood plugs at the inboard end.

Particulars of Side Scuttles: 10" side scuttles in fore peak store & fore hold of substantial construction, fitted with hinged dead lights, sill of lowest side scuttle 19" below freeboard deck in way of fore hold but above line of freeboard deck amidships. Side scuttles to crew spaces in poop & bridge are fitted with hinged deadlights & of substantial construction.

Particulars of Guard Rails:— Guard rails on poop, bridge & fore-castle 3'-3" high with 3 rods, and stanchions spaced about 6'-0" apart. Steel bulwarks on freeboard deck in wells 3'-9" high, for about 1/2 length of well efficiently constructed & supported, remainder guard rails (See sketch)

Particulars of Gangways, Lifelines, etc.:— Two gangways fitted from poop to bridge & from bridge to fore-castle, efficiently supported, having stanchions with 3 rails 3'-3" high.



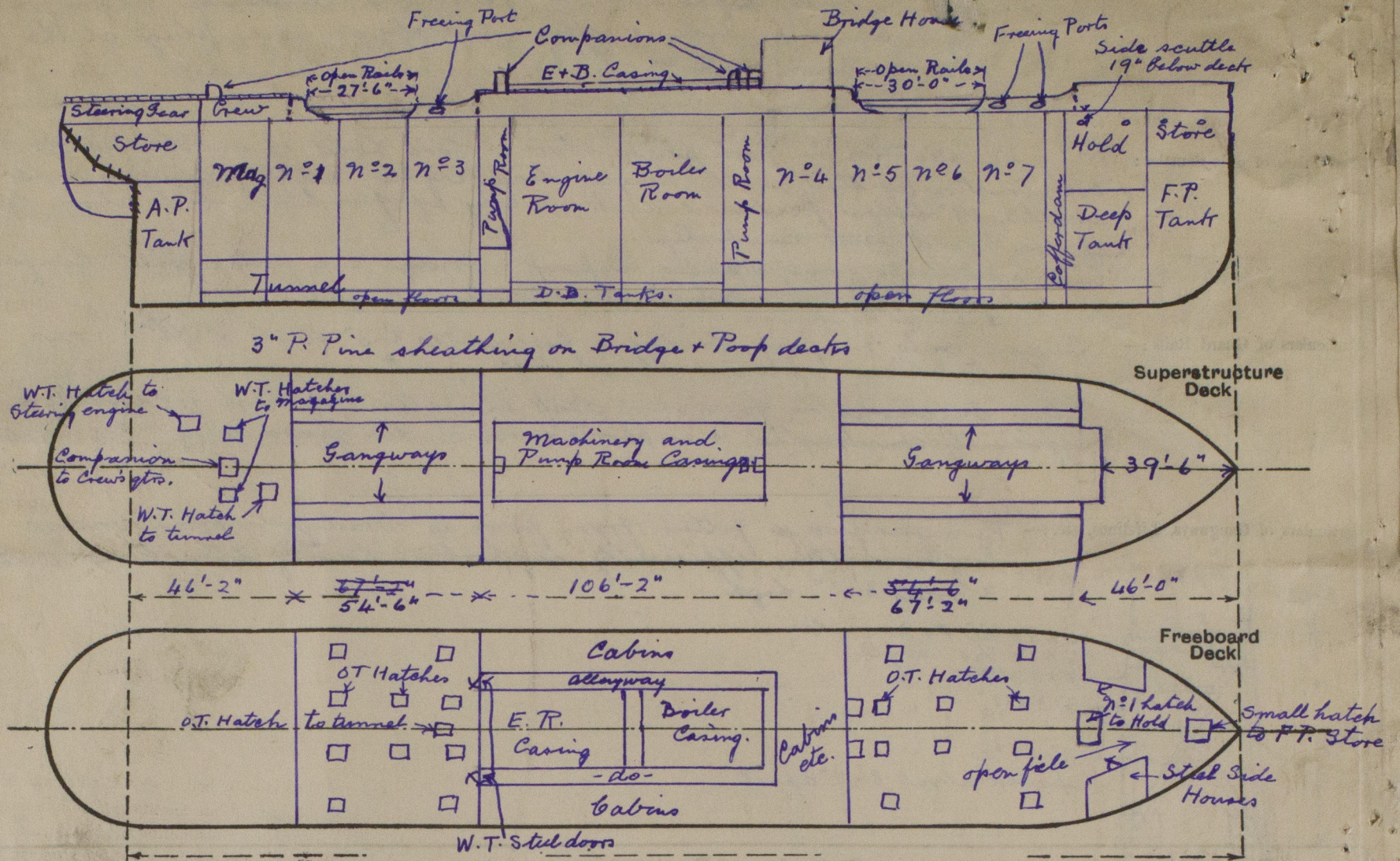
Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well	Length of Well 54'-6"	3'-9"	27'-6" open rails and (3'-6" x 1'-6")	one		
Forward Well	Length of Well 67'-2"	3'-9"	30'-0" open rails and (4'-0" x 1'-6")	Two		✓
State position of each freeing port { After Well:— Position 11 1/2" (F. and A. position and height above deck edge) { Forward Well:— As sketch, 15" State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— 3 bars vertical. 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	9/20"	8/20"	6 x 3 x 9/20 angles	30"	Brackets	None	✓	8'-0"
Raised Quarter Deck Bulkhead ...	✓							
Bridge, After Bulkhead	7/20"	7/20"	4 x 3 x 8/20 angles	30"	Takes top & bott. angles	2 at 5'-0" x 2'-6"	18 1/2"	8'-0"
Bridge, Forward Bulkhead	8/20"	8/20"	7 x 3 x 10/20 B.A.	30	Brackets	None	✓	8'-0"
Fore-castle Bulkhead	None							
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓							
Exposed Machinery Casings on Super-structure Decks	7/20"	7/20"	3 1/2 x 3 1/2 x 7/20 angles	29 1/2"	Brackets top & takes bottom angles	Engine Skylight	✓	2'-0"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓							
Deckhouses on Flush Deck Ships ... in Fore-castle	6/20"	6/20"	3 x 3 x 6/30 angles	26"	Takes top & bottom angles	4'-5" x 2'-1"	19"	8'-0"

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	No openings. ✓
Raised Quarter Deck Bulkhead ...	✓
Bridge, After Bulkhead	2- Steel W.T. doors, can be operated from both sides. ✓
Bridge, Forward Bulkhead	No openings. ✓
Fore-castle Bulkhead	Open ✓
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓
Exposed Machinery Casings on Super-structure Decks	Engine room skylight & steel hinged covers over stokehold gratings.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓
Deckhouses on Flush Deck Ships ... in Fore-castle	Steel hinged doors, can be operated from both sides. ✓

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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:—



Yale
 $.1L = 32$
 $32 \times 8008 = 256256$
 39.5
 32
 7.5

State any special features in the construction of the ship:— Oil Tanker.

Vessel surveyed in dry dock & generally examined internally where practicable. Condition survey only.

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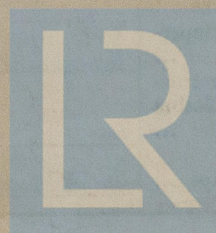
Builder's name and yard number Earles & Co. Ltd Hull, N°624

Names of sister ships

Owners The Admiralty

Fee £ 351.00

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