

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~
having Pooh & combined Bridge & Forecastle

Port of Survey London.

(Type of Superstructures.)

Date of Survey 5th-7th-8th-11th July 1932

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

'FRANCONIA'

British.
Liverpool.

147216.

20175.

1923-6.

Name of Surveyor J. Allan

Moulded Dimensions: Length 600.3 Breadth 73.5 Depth 45.0
Moulded displacement at moulded draught = 85 per cent. of moulded depth 35640 tons
Coefficient of fineness for use with Tables 739

Particulars of Classification +100 A1 Shell
decks with freeboard.

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	45.00	(a) Where D is greater than Table depth (D—Table depth) R =		Moulded Breadth (B)	73.5
Stringer plate	.04	(45.08 - 40.02) 3 = 15.18		Standard Round of Beam = $\frac{B \times 12}{50}$	17.64
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = .25 \times .147$	.04	(b) Where D is less than Table depth (if allowed) (Table depth—D) R =		Ship's Round of Beam	4
Depth for Freeboard (D) =	45.08	If restricted by superstructures		Difference	13.64
				Restricted to	
				Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right)$	$\frac{13.64}{4} \times .147$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Pooh enclosed ...	24.67	24.72	8'-0"	-	24.72
" overhang ...	.72				
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...			8'-0"		
" overhang forward ...	487.33	487.33	8'-6"		487.33
Forecastle enclosed ...					
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...	512.05	512.05			512.05

Standard Height of Superstructure 7.50

" " R.Q.D.

Deduction for complete superstructure 42.00

Percentage covered $\frac{S}{L} = 85.30$

" " $\frac{S_1}{L} = 85.30$

" " $\frac{E}{L} = 85.30$

Percentage from Table, Line A.
(corrected for absence of forecastle (if required)) 81.87

Percentage from Table, Line B.
(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = -34.38

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	70.03	1		70.03	72.25	70.03	1		70.03
$\frac{1}{4}$ L from A.P. ...	31.16	4		124.64	31.89	31.16	4		124.64
$\frac{2}{4}$ L " ...	7.70	2		15.40	7.97	7.70	2		15.40
Amidships ...		4					4		
$\frac{3}{4}$ L from F.P. ...	15.40	2		30.80	15.38	15.38	2		30.76
$\frac{1}{4}$ L " ...	62.32	4		249.28	61.52	61.52	4		246.08
F.P. ...	140.06	1		140.06	138.00	138.00	1		138.00
Total ...				630.21					624.91

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{5.30}{18} (.75 - .4265) = +.09$

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 = 45.20

Summer freeboard = 12.79

Moulded draught (d) = 32.41

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 8.10 8"

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 29780$

Tons per inch immersion at summer load water line

$T = 86.0$

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

= 8.66

8 $\frac{3}{4}$ "

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient .739 + .68 = 1.419

Depth Correction ... 15.18

Deduction for superstructures ... 34.38

Sheer correction09

Round of Beam correction50

Correction for Thickness of Deck amidships ... 1.52

Other corrections, scantlings, etc. ... 35.40

Summer Freeboard = 153.50

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

Tropical Fresh Water Line above Centre of Disc ... 16 $\frac{3}{4}$ "

Fresh Water Line " " ... 8 $\frac{3}{4}$ "

Tropical Line " " ... 8"

Winter Line below " " ... 8"

Winter North Atlantic Line " " ...

Tropical Fresh Water Freeboard ... 12' - 9 $\frac{1}{2}$ "

Fresh Water " " ... 11' - 4 $\frac{3}{4}$ "

Tropical " " ... 12' - 0 $\frac{3}{4}$ "

Winter " " ... 12' - 1 $\frac{1}{2}$ "

Winter North Atlantic " " ... 13' - 5 $\frac{1}{2}$ "

15 JUL 1932

MARKING FOR
RECEIVED 21 JUL 1932

Passenger lines to be marked 15 + 22" below centre of disc.

RECEIVED

2 MAR 1940

Lloyd's Register
Foundation

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS							
← C' DECK → B' DECK ← D' DECK →							
Description of Hatchway	1	2	3	4	5	6.	
Dimensions of Hatchway	15'-9" x 14'	16'-7" x 14'	13'-4" x 14'	8' x 8'	13'-4" x 14'	13'-4" x 14'	
COAMINGS { Height above Deck ... Thickness { Sides ... Stiffeners ... Ends ... Brackets, Stays ...	30" .AA .AA 7" B.A. nil	do for N° 1 hatch. 7" B.A. nil.	7" B.A. nil.	nil nil	8" B.A. nil	8" B.A. nil.	Nos 1, 2, 3 Ratcl. Rave N° 4 Ratcl. Rave Nos 5 & 6 Ratcl. "
HATCH BEAMS { Number ... Spacing ... Scantling and Sketch ... Bearing Surface ...	3 - 3'-11" 3 x 3 x .A2 12" x .32 3 x 3 x .A2 3"	3 - 4'-2" do for N° 1 hatch.	3 - 3'-6" do for N° 1 hatch.	1 - 4'-0" 3 x 3 x .A2 4" x .32 3 x 3 x .A2 3"	3 - 3'-6" do for N° 1 hatch.	3 - 3'-6" do for N° 1 hatch.	" " " "
FORE AND AFTERS { Number ... Spacing ... Unsupported Lengths ... Scantling* and Sketch ... Bearing Surface ...							all covers shawed. " " "
HATCH COVERS { Material ... Thickness... How fitted ... Bearing Surface ...	W.P. 3" F&A 3"	As for N° 1 hatch.					
Spacing of Cleats	22"	23"	24"	16"	24"	24"	
Number of Tarpaulins	3.	3.	3.	3.	3.	3.	

*Are wood fore and afters steel shod at all bearing surfaces ? ✓

Are battens and wedges efficient and in good condition ? yes.

Are tarpaulins in good condition and in accordance with rule requirements ? yes.

Are lashings provided in accordance with rule requirements ? yes.

Particulars of fiddley, funnel and ventilator coamings :—

Fiddley, funnel, vents coamings & skylights strongly constructed & in efficient condition.

Particulars of Flush Bunker Scuttles:—

NONE.

Particulars of Companionways :-

Deck	Door	Material	Size	Weight	Notes
On 'O' deck	1 wood sliding door	6'-0" x 3'-11"	sill 6"	operated both sides.	
On 'C' deck	1 steel door	5'-0" x 3'-0"	sill 9"	operated both sides.	
"	2 "	5'-9" x 2'-6"	" 9"	" "	W.T. doors
"	2 "	5'-9" x 2'-9"	" 8"	" "	" "
"	2 "	5'-9" x 3'-6"	" 9"	" "	" "
"	4 "	5'-9" x 2'-6"	" 9"	" "	" "
"	2 double wood	5'-6" x 5'-3"	" 4"	" "	" "
'B' deck	2 steel	5'-9" x 3'-0"	" 9"	" "	W.T. doors in upper Bridge front.
'O' "	1 wood	5'-6" x 2'-6"	" 9"	" "	to aft peak stores.
"	2 steel	5'-9" x 2'-0"	" 6"	" "	upper 1/2 door stowed, to tunnel escapes.
"	1 wood	6'-2" x 2'-0"	" 3"	" "	to insulated stores.
"	1 opening	1'-6" x 3'-6"	" 7 1/2"	" "	baggage lift.

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

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

On 'C' decks

W.T. patent mushroom tops.	1	Anchor Crane m.v. 22" dia. 8'-6" high to fore head store.
	6	m.v.'s 18" dia. coamings 5'-0" x .40 to holds & tween decks.
	2	" 12" " " 5'-0" x .40 " tween decks.
	4	" 24" " " 5'-0" x .40 " holds.
	1	" 22" " " 5'-0" x .40 " tween decks.
	1	" 15" " " 6'-8" x .40 " " "
	2	" 9" " " 2'-0" x .32 " " "
	1	cowl vent 24" " " 3'-0" x .34 " hold.

On House Tops 'C' decks, 2 vents 22" dia. coamings 30" x .34 to tween decks.

"	3	10" " " 30" x .34 " " "
"	2	20" " " 30" x .34 " " "
"	4	24" " " 27" x .34 " " "

On 'D' decks aft 5 " 8" " " 6'-0" x 1/2" supported.

All cowl vents fitted with wood plugs and canvas covers.

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

On 'C' deck 1 c.i. air pipe 4" dia. 27" high to fore peak tank.
 " " 1 " " 4" " 25" " " aft " "
 " 'D' " 5 " " 4" " 30" " " D.B. tanks.

The remainder of D.B. air pipes come through shell between 'C' & 'D' decks and are fitted with non-return valves. Canvas covers are supplied for all air pipes passing through decks. ✓

Particulars of Gangway Cargo and Coaling Ports :—

5 coaling ports P. & S. between 'D' & 'E' decks 3'-0" x 2'-8".
1 Ash shoot door P. & S. " 'C' & 'D' " 6'-0" x 5'-0".
2 gangway doors P. & S. " 'C' & 'D' " 8'-0" x 6'-0".

all doors are strongly constructed & in efficient condition.

tary Discharge Pipes :—

tary Discharge Pipes:
below fireboard deck fitted with geared storm valves.
above " " " gummetal N.R.V's
discharges about loadline & fitted with storm valves & efficient traps.

'D' decks fitted with hinged deadlights from fore end No 3 hatch forward.
'E' " " " " except forward & after dining saloons which have portable plugs
'F' " " " " " & discs. ✓

On 'C' decks forward rails 4'-3" high with 6 rods & stanchions about 4'-6" apart.
 " " " aft " 4'-0" " " 4 rods & rail / " " 4'-0" "

rs of Gangways, Lifelines, etc. :—

no special arrangements for fitting lifelines.

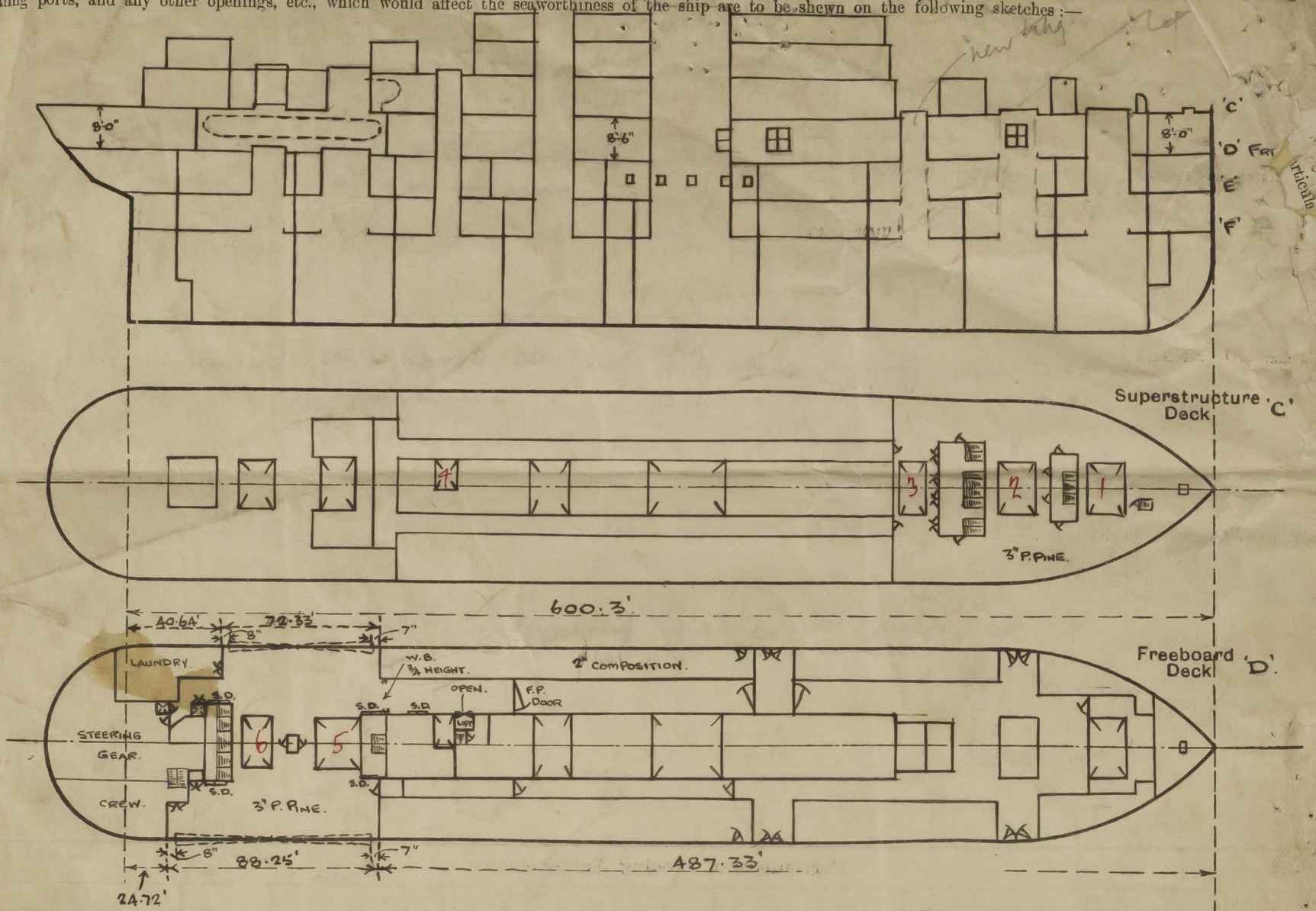
Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
er Well	88'-3"	3'-9"	NONE.	✓	✓	✓
Forward Well	✓	✓	✓	✓	✓	✓

S. position of each freeing port } After Well :— ✓
 and A. position and height above deck edge) } 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.

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 ... ..	.26 ✓	.26 ✓	3½" fl. ✓	30" ✓	nil. ✓	6'-0" x 5'-0" ✓	10" ✓	8'-0" ✓
Raised Quarter Deck Bulkhead ...	✓							
Bridge, After Bulkhead ... ..	.26 ✓	.26 ✓	3½" fl. ✓	30" ✓	nil. ✓	5'-6" x 3'-0" ✓	7" ✓	8'-6" ✓
Bridge, Forward Bulkhead	✓							
Forecastle Bulkhead	✓							
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Free- board or Raised Quarter Decks ...	✓							
Exposed Machinery Casings on Super- structure Decks	✓							
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances	✓							
Deckhouses on Flush Deck Ships ...	✓							

Particulars of Closing Appliances (state if capable of being manipulated from both sides).			
Poop Bulkhead	...	...	<ul style="list-style-type: none"> 1 double wood door 5'-9" x 5'-3" sill 12" operated both sides 2 " steel " 6'-0" x 5'-0" " 10" " " " 2 wood sliding " 5'-6" x 3'-0" " 8" " " "
Raised Quarter Deck Bulkhead	...	...	<ul style="list-style-type: none"> 1 double wood " 5'-11" x 4'-4" " 3" " " " 1 wood door 5'-6" x 2'-0" " 9" " " "
Bridge, After Bulkhead	...	...	<ul style="list-style-type: none"> 1 wood door 5'-6" x 3'-0" sill 7" operated both sides. 2 wood sliding doors 5'-6" x 2'-6" " 9" " " "
Bridge, Forward Bulkhead	...	...	<ul style="list-style-type: none"> 1 opening with weatherboards ^{full} height, specially stiffened in view of width of opening.
Master Bulkhead	...	...
Unprotected Machinery Casings on Freeboard or Raised Quarter Decks	...	✓	
Unprotected Machinery Casings on Superstructure Decks	...	✓	
Machinery Casings within Superstructure not fitted with Class I Closing Appliances	...	✓	
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 shown on the following sketches:—



Lowest side scuttle 13'-3" forward of Φ = 11'-0 1/4" below steel freeboard deck.

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

Sheathing on 'C' & 'D' decks exposed 3" P.P.
 " " 'D' decks Φ 2" Magnesite composition.

Fore & aft peak hatch 3'-10" x 3'-10" coaming 12" x 44 steel hinged w.t. cover.

Vessel surveyed afloat & in dry dock during condition survey.

Builder's name and yard number J. Brown & Co. Ltd. No 492.

Names of sister ships

Owners Cunard S. S. Co. Ltd.

Fee £ 17 : 0 : 0 Received by me

2/c 12/7/32



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