

Index. No. 37
(For London Office only.)

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

Mch. no. 7450

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Bridge, Rascal & Deck & Forecastle

SAINT CONAN

ULSTER HERC (Type of Superstructures.)

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
"LOGIC"	British Belfast Glasgow	147272	483	1924.8

Moulded Dimensions: Length 150.0 Breadth 25.0 Depth 12'-0 1/4"

Moulded displacement at moulded draught = 85 per cent. of moulded depth 818 tons

Coefficient of fineness for use with Tables .747 ✓

Port of Survey Manchester

Date of Survey 11th to 21st January, 1932

Name of Surveyor C. Parker

Particulars of Classification +100A1

Moulded depth	...	...	...	...	12.02	(a) Where D is greater than Table depth (D-Table depth) R = $(12.05 - 10.00) \times 1.54 = +2.36$	Round of Beam correction	Moulded Breadth (B)	...	...	...	25.0
Stranger plate	...	...	...	...	03	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = 6.00$	Ship's Round of Beam	...	...	...	= 5.25
Sheathing on exposed deck	...	...	...	...	✓	If restricted by superstructures	Difference	...	...	...	...	.75
$T \left(\frac{L-S}{L} \right) =$	...	...	...	...	✓		Restricted to	...	...	...	...
Depth for Freeboard (D) =	...	...	...	...	12.05		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right)$	...	...	...	...	= $\frac{75}{4} \times 22.95 = +4.00$

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 ...	86.48	86.48	4'-0"	✓	86.48
„ overhang ...					
Bridge enclosed...	8.96	8.96	7'-0"	✓	8.96
„ overhang aft ...					
„ overhang forward					
P'cle enclosed ^{4 HAUSES} ...	20.14 22.21	20.14	6'-6"		20.14
„ overhang ...	6"				
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...					
„ „ forward					
Total ...	115.58	115.58			115.58

Standard Height of Superstructure..... 6.00 ✓

" " R.Q.D..... 3.333

Deduction for complete superstructure..... 21.0 ✓

Percentage covered $\frac{S}{L} = 77.05$

" " $\frac{S_1}{L} = 77.05$

" " $\frac{E}{L} = 77.05$ ✓

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

Percentage from Table, Line B. 71.67
(corrected for absence of forecastle (if required))

Interpolation for bridge less than .2L (if required) ✓

Deduction = $21 \times .7167 = -15.05$

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	25.00	1	25.00	29.62	25.00	1	25.00
1/2 L from A.P. ...	11.13	4	44.52	11.75	9.68	4	44.52
3/4 L " ...	2.75	2	5.50	1.12	2.42	2	5.50
Amidships ...		4	—	✓	—	4	—
1/2 L from F.P. ...	5.50	2	11.00	7.12	5.11	2	10.22
1 L " ...	22.25	4	89.00	22.5	20.44	4	81.76
F.P. ...	50.00	1	50.00	46.62	43.62	1	43.62
Total ...			225.02				210.62

	FORWARD SHEER.				
	ACTUAL	STANDARD	A.	S.	
Mean actual sheer aft	7.12	5.50	3	21.36	16.50
Mean standard sheer aft	22.50	22.25	3	67.50	66.75
	46.62	50.00	1	46.62	50.00
Mean actual sheer forward				135.48	133.25
Mean standard sheer forward				135.48	133.25
				135.48	EXCESS
Length of enclosed superstructure forward of amidships				133.25	

" " " aft of = 54
 Chan aft increased by weight
 of intact R.B.D. having a height
 in excess of the standard.

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{14.40}{18} (.75 - .3852) = +.29$ ✓

If limited on account of midship superstructure. ✓

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.

		Ft.
Depth to Freeboard Deck	=	<u>12.05</u>
<i>R.Q.D.</i>		<u>4.00</u>
Summer freeboard	=	<u>16.05</u>
		<u>4.33</u>
Moulded draught (d)	=	<u>11.72</u>

Winter freeboard = $\frac{d}{4}$ inches = 2.93 = 3"

Deduction for Fresh
Water.

Displacement in salt water at
summer load water line

$\Delta = 985$
Tons per inch immersion at
summer load water line

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

$$= 3.08$$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction	2.36	-
Deduction for superstructures	-	15.05
Sheer correction ... ..	.29	-
Round of Beam correction ... ..	.09	-
Correction for Thickness of Deck amidships	.04	-
Other corrections, scantlings, etc.	48.0	-

Summer Freeboard 51.95.90

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ^{Raised Quarter} Wood, Steel, Deck:

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 " " LIMITED
Winter " "
Winter North Atlantic "

131 OCT 1932

MARKING FORM
29 AUG 1935
RECEIVED

MARKING FORM
RECEIVED 7 MAR 1934

MARKING FORM
13 DEC 1932

13 DEC 1932

© 2020
Name of Ship SAINT CONAN

Freeboard Report Examined

(Date) 16 Nov 1957

Signed [Signature]

0180 2/2

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS

Description of Hatchway	Fore Hatch	Main Hatch	Bunker Hatch	Fidley
Dimensions of Hatchway	25'-1" x 14'-0"	21'-6" x 15'-6"	12'-0" x 4'-10"	
Height above Deck	2'-9"	2'-9"	4'-2" BA	
Thickness	4 1/2"	4 1/2"	4 1/2"	
Stiffeners	7 1/2" x 3 BA	7 1/2" x 3 BA	6" bulb plate stays	
Brackets, Stays	6" bulb plate stays	6" bulb plate stays		
Number	5	4		
Spacing	10' x 3 1/2"	12' x 3 1/2"	11 1/2" x 4 1/2"	
Scantling and Sketch	10' x 3 1/2"	12' x 3 1/2"	11 1/2" x 4 1/2"	
Bearing Surface	3'	3'		
Material	Wood	Wood	Wood	
Thickness	2 1/2"	2 1/2"	2 1/2"	
How fitted	Fore & aft	Fore & aft	Fore & aft	
Bearing Surface	3'	3'		
Spacing of Cleats	24"	24"	26"	
Number of Tarpaulins	3	3	2	

Are wood fore and afters steel shod at all bearing surfaces? *Yes*
 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 fiddle, funnel and ventilator coamings:-

Stokehold 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:-

None

Particulars of Companionways:-

None

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

2 ventilators on forecastle deck 8" dia. Coamings 36" x 32" led to midship forecastle.
 Ventilators constructed in accordance with Rules & coamings closed with wood plugs & canvas covers.

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

One steel air pipe on forecastle deck 13 1/2" high x 1 1/2" dia. from fore peak tank.
 One steel air pipe on raised quarter deck 14" high x 1 1/2" dia. from after peak tank.
 Air pipes have snifting hole on top of head & are closed with wood plugs.

Particulars of Gangway Cargo and Coaling Ports:-

None

Particulars of Scuppers and Sanitary Discharge Pipes

One scup pipe 4" dia. 22" below main dk. from Green's Lavatory Forward, fitted with non return valve.
 One scup pipe 4" " 24" " raised quarter dk. from Officer's quarters aft, fitted with non return valve.

Particulars of Side Scuttles:-

4 8" side scuttles each side of forecastle, 15" below 1st dk. fitted with deadlights.
 One 8" side scuttle each side of bridge space, 15" below bridge deck, without deadlights.
 All scuttles of substantial construction.

Particulars of Guard Rails:-

Steel bulwarks on raised quarter dk. & Bridge dk. 3'-0" and 3'-6" high respectively.
 Guard rails on forecastle deck, 3'-2" high with two rods & stanchions spaced 4'-6" apart, portable.
 One way of windlass with two steel wires rope through stanchions.
 Steel cowards on main deck 4'-0" high.

Particulars of Gangways, Lifelines, etc.:-

Steel wire life line fitted on port side of main deck over hatchway, from bridge to forecastle.
 Wire rope through portable stanchions 4'-0" high with permanent sockets secured to hatch coaming longitudinal stiffener.

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 R.P. Deck...	86' 4 1/8"	3'-0"	2'-10" x 1'-6" 2'-9" x 1'-6"	3 1	16.86 sq. ft.	17.3 sq. ft.
Forward Well	31' 8 1/2" 32' 6"	4'-0"	One 2'-10" x 1'-8" One 2'-9" x 1'-8"	2	9.32 sq. ft.	9.75 sq. ft.

State 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.

Ports 8" above deck & fitted with shutters.

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	✓	✓	✓	✓	✓	✓	✓	✓
Raised Quarter Deck Bulkhead	✓	✓	✓	✓	✓	✓	✓	4'-0"
Bridge, After Bulkhead	✓	25	5 x 3 x 50	36	Brackets top and bottom	✓	✓	✓
Bridge, Forward Bulkhead	30	26	5 1/2 x 3 x 36	30	Brackets top & bottom	✓	✓	4'-0"
Forecastle Bulkhead	35	35	3 x 3 x 35	30	None	Two 4'-6" x 2'-0"	16"	6'-6"
Trunk, Aft	✓	✓	✓	✓	✓	✓	✓	✓
Trunk, Forward	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	30	25	3 x 2 1/2 x 25	30	Brackets top & bottom	Two 4'-6" x 2'-0"	18"	6'-9"
Exposed Machinery Casings on Superstructure Decks	✓	✓	✓	✓	✓	✓	✓	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓	✓	✓	✓	✓	✓	✓	✓
Deckhouses on Flush Deck Ships	✓	✓	✓	✓	✓	✓	✓	✓

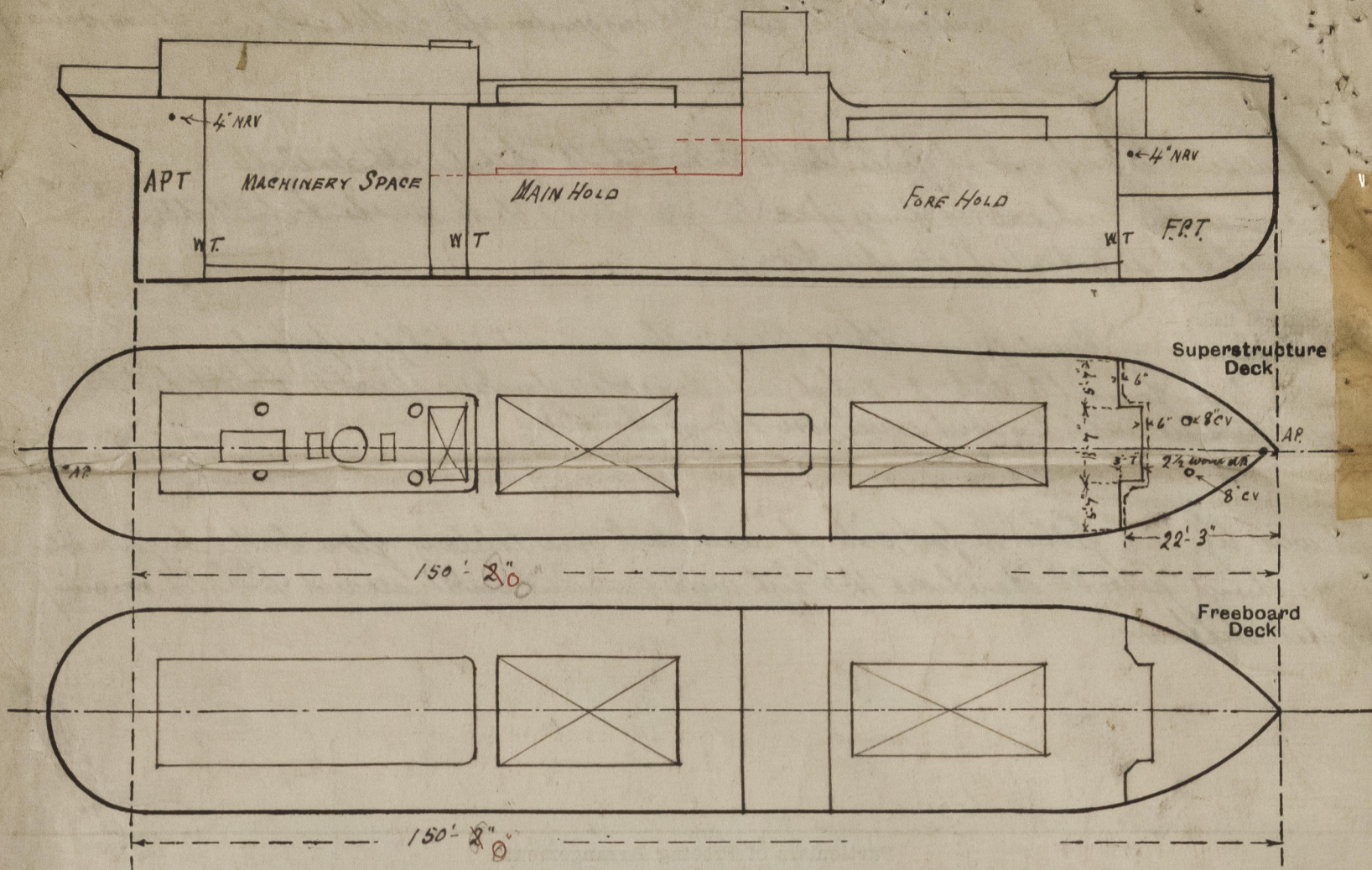
Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead	✓
Raised Quarter Deck Bulkhead	None no openings
Bridge, After Bulkhead	None no openings
Bridge, Forward Bulkhead	None no openings
Forecastle Bulkhead	Hinged steel doors capable of being manipulated from both sides.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	Hinged steel doors capable of being manipulated from both sides.
Exposed Machinery Casings on Superstructure Decks	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓
Deckhouses on Flush Deck Ships	✓

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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 shewn on the following sketches:



FORECASTLE
 Enclosed = 18.67
 Houses = $\frac{3.58 \times 5.08}{12.37} = 1.47$
 18.67
 20.14

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

Builder's name and yard number

Names of sister ships

Owners

Belfast S.S. Co. Ltd.

Fee £ 5. : 2. : 0.

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