

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

22948.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Russia Quarter Deck + Main Deck

Port of Survey NEWPORT MON

Date of Survey 11th April 1932

Name of Surveyor D. Macfarlane

Particulars of Classification 8th 100H1.

(Type of Superstructures.)

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<u>CEDAR TREE</u>	<u>British London</u>	<u>160419</u>	<u>1554</u>	<u>1928.5</u>

Moulded Dimensions: Length 244.75 Breadth 36.41 Depth 18.08

Moulded displacement at moulded draught = 85 per cent. of moulded depth 3115 tons

Coefficient of fineness for use with Tables 796

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	<u>18.08</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(18.13 - 16.31) 1.82</u>		Moulded Breadth (B)	<u>36.41</u>
Stringer plate	<u>.53</u>	+ <u>3.43</u>		Standard Round of Beam = $\frac{B \times 12}{50}$	<u>8.74</u>
Sheathing on exposed deck	<u>.05</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Ship's Round of Beam	<u>8.94</u>
$T \left(\frac{L-S}{L} \right) =$				Difference	<u>.01</u>
Depth for Freeboard (D) =	<u>18.13</u>	If restricted by superstructures		Restricted to	
				Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right)$	<u>NUL.</u>

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	<u>146.5</u>	<u>146.50</u>	<u>3.11</u>	<u>3.92</u>	<u>144.90</u>
" overhang	✓				
Bridge enclosed...	✓				
" overhang aft	✓				
" overhang forward	<u>23.79</u>	<u>23.79</u>	<u>4.0</u>		<u>23.79</u>
Fore enclosed ...	<u>26.93</u>				
" overhang	<u>2.93</u>	<u>1.80</u>			<u>1.80</u>
Trunk aft	✓				
" forward	✓				
Tonnage opening aft	✓				
" forward	✓				
Total	<u>173.22</u>	<u>172.09</u>			<u>170.49</u>

Standard Height of Superstructure 6.0

" " R.Q.D. 3.963

Deduction for complete superstructure 30.48

Percentage covered $\frac{S}{L} =$.7078

" " $\frac{S_1}{L} =$.7030

" " $\frac{E}{L} =$.6966

Percentage from Table, Line A. .6242

(corrected for absence of forecastle (if required))

Percentage from Table, Line B.

(corrected for absence of forecastle (if required))

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

Deduction = 30.48 x .6242 = -19.03

SHEER CORRECTION.

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product
A.P. ...	<u>30.3448</u>	1	<u>34.48</u>	<u>30.0</u>	<u>30.00</u>	1	<u>30.00</u>
$\frac{1}{4}L$ from A.P. ...	<u>13.23</u>	4	<u>64.36</u>	<u>13.23</u>	<u>1323</u>	4	<u>52.92</u>
$\frac{2}{4}L$ " ...	<u>2.29379</u>	2	<u>7.58</u>	<u>3.29</u>	<u>331</u>	2	<u>6.58</u>
Amidships	<u>26</u>	4				4	
$\frac{3}{4}L$ from F.P. ...	<u>7.53758</u>	2	<u>15.16</u>	<u>7.53</u>	<u>755</u>	2	<u>15.10</u>
$\frac{1}{4}L$ " ...	<u>30.21</u>	4	<u>122.72</u>	<u>30.21</u>	<u>3021</u>	4	<u>120.84</u>
F.P. ...	<u>69.6896</u>	1	<u>68.96</u>	<u>69.00</u>	<u>6900</u>	1	<u>69.00</u>
Total	<u>320.00</u>		<u>310.26</u>				<u>294.44</u>

Mean actual sheer aft = Deficient

Mean standard sheer aft

Mean actual sheer forward = Deficient

Mean standard sheer forward

Length of enclosed superstructure forward of amidships = .098

" " aft of " = .500

Standard height of R.Q.D. 3'-11.58"

Actual 3'-11"

58"

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{15.82}{18} \left(.75 - \frac{3539}{3961} \right) = + .35$

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.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient <u>.68 + .796</u>
Depth to Freeboard Deck = <u>18.13</u>	$\Delta = 3400$ at <u>16.8 1/2</u>	<u>1.36</u>
Summer freeboard = <u>1.56</u>	Tons per inch immersion at summer load water line	Depth Correction ... <u>3.43</u>
Moulded draught (d) = <u>16.57</u>	T = <u>18.6</u>	Deduction for superstructures ... <u>19.03</u>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>4.14</u>	Deduction = $\frac{\Delta}{40T}$ inches = <u>4.57</u>	Sheer correction ... <u>35</u>
Addition for Winter North Atlantic Freeboard (if required) =		Round of Beam correction ... <u>-</u>
		Correction for Thickness of Deck amidships ... <u>47.00</u>
		Other corrections, scantlings, etc. ...
		Summer Freeboard = <u>65.66</u>

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, 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	"
Winter	"
Winter North Atlantic	"

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	1	2	3	4					
Dimensions of Hatchway	24'2" x 26'2" 22'3" x 22'6"	27'8" x 26'0" 27'8" x 26'0"	27'8" x 26'0" 27'8" x 26'0"	27'8" x 26'0" 27'8" x 26'0"					
COAMINGS	Height above Deck	4'5"	4'5"	4'5"	4'5"				
	Thickness Sides	4'5"	4'5"	4'5"	4'5"				
	Stiffeners	4'5"	4'5"	4'5"	4'5"				
	Brackets, Stays	4'5"	4'5"	4'5"	4'5"				
HATCH BEAMS	Number	4	4	4	4				
	Spacing	5'11"	5'11"	5'11"	5'11"				
	Scantling and Sketch	3" x 12" x 3'4"	3" x 12" x 3'4"	3" x 12" x 3'4"	3" x 12" x 3'4"				
	Bearing Surface	3" x 12" x 3'4"	3" x 12" x 3'4"	3" x 12" x 3'4"	3" x 12" x 3'4"				
FORE AND AFTERS	Number	4	4	4	4				
	Spacing	5'11"	5'11"	5'11"	5'11"				
	Unsupported Lengths	5'11"	5'11"	5'11"	5'11"				
	Scantling and Sketch	3" x 12" x 3'4"	3" x 12" x 3'4"	3" x 12" x 3'4"	3" x 12" x 3'4"				
HATCH COVERS	Material	W.P.	W.P.	W.P.	W.P.				
	Thickness	3"	3"	3"	3"				
	How fitted	F.A.	F.A.	F.A.	F.A.				
	Bearing Surface	5'10" x 5'1"	5'10" x 5'1"	5'10" x 5'1"	5'10" x 5'1"				
Spacing of Cleats	7'2"	7'2"	7'2"	7'2"					
Number of Tarpaulins	2	2	2	2					

Particulars of fiddle, funnel and ventilator coamings:—
*Stitchwork preferrable covered by strong hinged doors.
 Siding, funnel, ventilator coamings in efficient condition.
 Engines 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:—

4 Vents 14" dia coaming 37" high x 38" to Holes
 2 " 14" " 31" " x 38" to Holes (Brackets)
 1 " 10" " 36" " x 38" to Holes
 1 " 6" " 44" " x 38" to Holes (Brackets)
 1 " 6" " 30" " x 30" to Holes
 2 " C.S. 4" dia 26" high to Holes
*All vents fitted with wood plugs
 a canvas cover*

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

On fore 1 air pipe 14" dia 14 1/2" high to fore peak tank
 On aft 1 " 14" " 14 1/2" " to aft peak tank
 R.Q.D. 2 " 3 " 36" " to No 1 DB tank
 2 " 3 " 25" " to ER tank
 2 " 3 " 25" " to BR tank
*2 air pipes 3" dia 33" high to No 3 DB tank
 1 " 4" 31" " to R.P.T.
 No stuffing tubes in air pipes
 Wood plugs fitted*

Particulars of Gangway Cargo and Coaling Ports:—
None

Particulars of Scuppers and Sanitary Discharge Pipes —
*No scupper pipes. Sanitary pipes with 4 in. diam valves at
 Ship's side*

Particulars of Side Scuttles:—
All side scuttles fitted with hinged dead lights

Particulars of Guard Rails:—
*Guard rails on forecastle 3.3 Speed Sanction 4.9,
 with 3 rails*

Particulars of Gangways, Lifelines, etc.:—
None
Efficient lifelines fitted in forward well

Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
R.Q.D. After Well	110'0"	3'8"	3'3" x 1'8"	4	21.6 sq	20 sq
Forward Well	72'0"	3'8"	3'3" x 1'8"	4	21.6 sq	14.5 sq

State position of each freeing port ...
 (F. and A. position and height above deck edge) ...
 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								
Raised Quarter Deck Bulkhead	✓	14	Deep brackets 7" spacing	3'10"	Brackets at B	14	14	3'11"
Bridge, After Bulkhead			Plating 8" x 3'3"	3'10"	1 Sup at top			
Bridge, Forward Bulkhead			16" x 3'3"	3'10"				
Forecastle Bulkhead	✓	38	4 x 3 x 32	3'10"	14	4'8" x 2'0"	18"	7'0"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	14	38	3 x 3 x 25	32	But laps	4'8" x 2'0"	22	7'0"
Exposed Machinery Casings on Superstructure Decks								
Machinery Casings within Superstructures not fitted with Class I Closing Appliances								
Deckhouses on Flush Deck Ships								

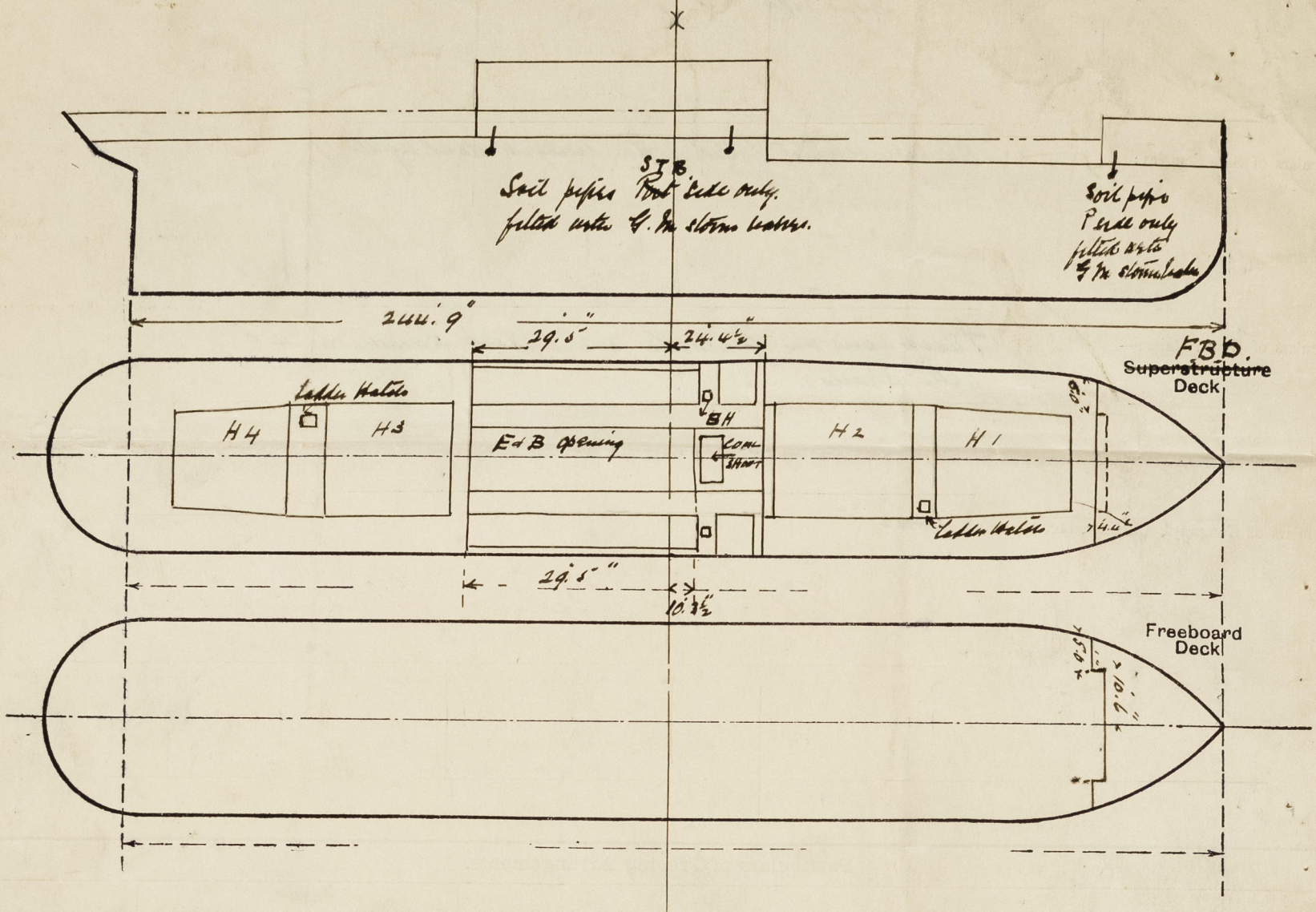
Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead	✓
Raised Quarter Deck Bulkhead	✓
Bridge, After Bulkhead	✓
Bridge, Forward Bulkhead	✓
Forecastle Bulkhead	✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓
Exposed Machinery Casings on Superstructure Decks	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓
Deckhouses on Flush Deck Ships	✓

*Steel hinged doors operated from within side!
 Steel hinged doors operated from both sides*

Cedar tree

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:—

Increase deck sheathing 2 1/2" P. also inside fore

Bulkhead hatch on side top 12' 0" x 14' 0" coaming 9' 3 1/2" x 5' 5" with bars 2 1/2". Ladder hatch on bulkhead 3' 6" x 1' 10" coaming 18 1/2" high x 38" with angle 3". Bulkhead hatch on RGD 1' 10" x 1' 10" coaming 18" x 32" with steel latched door 2' 6" x 2' 6" angle coaming 4' 3" x 32" with screw down fastenings at corners of chain locker. All above hatches fitted with wood cross 2 1/2" x 1/2" cleats. Hatches & 2 tarpaulins bulkheads fitted between main hatches & between fore hatch and a second quarter deck.

DW 1500 tons at 13' 0" draught. Tons per inch 18.27
 1720 . 14.0 . 18.40
 1942 . 15.0 . 18.52
 2165 . 16.0 . 18.64
 2323 . 16.8 1/2 . 18.73

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Side houses. $\frac{574.33}{15.5} = 1.40$

Fds 26.72

4.33

22.39

1.40

23.79

24.47

24.47

68 7.99 = 1.68

24.47

26.72

2.25

1.12

1/2

Builder's name and yard number

J Brown & Sons Ltd

Names of sister ships

Owners

Fraser & Neave Co Ltd. (Howard Jones & Co agents)

Fee £

9 : 7 : 0

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