

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

29 AUG 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Poop, Bridge, and Forecastle

(Type of Superstructures.)

Port of Survey Newcastle on Tyne

Date of Survey 26th August 1932

Name of Surveyor Cliphenson

Particulars of Classification + 100A.1

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
BRIGHTON.	<u>British</u> <u>Newcastle</u>	<u>149452</u>	<u>5359</u>	<u>1928-1.</u>

Moulded Dimensions: Length 409.5' Breadth 53.66 Depth 31.5'

Moulded displacement at moulded draught = 85 per cent. of moulded depth 12891 tons

Coefficient of fineness for use with Tables .767

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <u>31.50</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(31.53 - 27.30) 3.00 = + 12.69</u>	Moulded Breadth (B) <u>53.66'</u>
Stringer plate <u>.03</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50}$ = <u>12.88"</u>
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <u>13 1/2"</u>
Depth for Freeboard (D) = <u>31.53'</u>		Difference <u>.62"</u>
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$ = $\frac{.62}{4} \times .5244 = - .08$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed <u>19.45</u>	<u>34.50</u>	<u>34.50</u>	<u>8'0"</u>	<u>✓</u>	<u>34.50</u>	Standard Height of Superstructure <u>7.50</u>
Sidehouse <u>3'0" x 1/4"</u>	<u>9</u>					" " R.Q.D. <u>✓</u>
R.Q.D. enclosed	<u>✓</u>					Deduction for complete superstructure <u>42.00</u>
overhang	<u>109.89</u>	<u>109.89</u>	<u>8'0"</u>	<u>✓</u>	<u>109.89</u>	Percentage covered $\frac{S}{L} = 48.06\%$
Bridge enclosed...	<u>5.6</u>	<u>4.96</u>	<u>8'0"</u>	<u>✓</u>	<u>4.96</u>	" " $\frac{S_1}{L} = 47.56\%$
overhang aft	<u>4.75</u>	<u>.37</u>			<u>.37</u>	" " $\frac{E}{L} = 17.56\%$ ✓
overhang forward	<u>44.6</u>	<u>45.02</u>	<u>8'0"</u>	<u>✓</u>	<u>45.02</u>	Percentage from Table, Line A. (corrected for absence of forecastle (if required))
Fore enclosed <u>5'0" x 1/4"</u>	<u>45.02</u>					Percentage from Table, Line B. <u>33.92%</u> ✓
overhang	<u>4</u>					(corrected for absence of forecastle (if required))
Trunk aft						Interpolation for bridge less than .2L (if required)
forward						Deduction = <u>42 x .3392 = - 14.25"</u> ✓
Tonnage opening aft						
" forward						
Total	<u>196.77</u>	<u>194.74</u>			<u>194.74</u>	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	<u>50.95</u>	<u>1</u>		<u>50.95</u>	<u>76.0</u>	<u>76.00</u>	<u>1</u>		<u>76.00</u>	Mean actual sheer aft = <u>6 excess</u>
1/8 L from A.P. ...	<u>22.67</u>	<u>4</u>		<u>90.68</u>	<u>82 1/2</u>	<u>33.57</u>	<u>4</u>		<u>134.28</u>	Mean actual sheer forward = <u>6 excess</u>
1/4 L " ...	<u>5.60</u>	<u>2</u>		<u>11.20</u>	<u>8 1/2</u>	<u>8.39</u>	<u>2</u>		<u>16.78</u>	Mean standard sheer forward
Amidships ...		<u>4</u>					<u>4</u>			Length of enclosed superstructure forward of amidships = <u>.13</u>
3/4 L from F.P. ...	<u>11.21</u>	<u>2</u>		<u>22.42</u>	<u>13</u>	<u>13.57</u>	<u>2</u>		<u>27.14</u>	" " aft of " = <u>.14</u>
1/2 L " ...	<u>45.34</u>	<u>4</u>		<u>181.36</u>	<u>53.5</u>	<u>54.30</u>	<u>4</u>		<u>217.20</u>	
F.P. ...	<u>101.90</u>	<u>1</u>		<u>101.90</u>	<u>120.0</u>	<u>120.00</u>	<u>1</u>		<u>120.00</u>	
Total				<u>458.51</u>					<u>591.40</u>	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{132.89}{18} \left(.75 - \frac{.2403}{.75} \right) = - 3.76$

If limited on account of midship superstructure.

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

<p>Deduction for Tropical Freeboard.</p> <p>Addition for Winter and Winter North Atlantic Freeboard.</p> <p>Depth to Freeboard Deck = <u>31.53</u></p> <p>Summer freeboard = <u>6.15</u></p> <p>Moulded draught (d) = <u>25.38</u></p> <p>Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>6.34</u> = <u>6 1/4"</u></p> <p>Addition for Winter North Atlantic Freeboard (if required) =</p>	<p>Deduction for Fresh Water.</p> <p>Displacement in salt water at summer load water line</p> <p>$\Delta =$</p> <p>Tons per inch immersion at summer load water line</p> <p>T =</p> <p>Deduction = $\frac{\Delta}{40 T}$ inches</p> <p><u>not available</u></p>	<p>TABULAR FREEBOARD corrected for Flash Deck (if required)</p> <p>Correction for coefficient</p> <table border="1"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction</td> <td><u>12.69</u></td> <td></td> </tr> <tr> <td>Deduction for superstructures</td> <td></td> <td><u>14.25</u></td> </tr> <tr> <td>Sheer correction</td> <td></td> <td><u>3.76</u></td> </tr> <tr> <td>Round of Beam correction</td> <td></td> <td><u>.08</u></td> </tr> <tr> <td>Correction for Thickness of Deck amidships</td> <td></td> <td></td> </tr> <tr> <td>Other corrections, scantlings, etc.</td> <td></td> <td></td> </tr> <tr> <td></td> <td><u>12.69</u></td> <td><u>18.09</u></td> </tr> <tr> <td>Summer Freeboard =</td> <td><u>73.82</u></td> <td></td> </tr> </table>		+	-	Depth Correction	<u>12.69</u>		Deduction for superstructures		<u>14.25</u>	Sheer correction		<u>3.76</u>	Round of Beam correction		<u>.08</u>	Correction for Thickness of Deck amidships			Other corrections, scantlings, etc.				<u>12.69</u>	<u>18.09</u>	Summer Freeboard =	<u>73.82</u>	
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:— 6' 1 3/4"

Tropical Fresh Water Line above Centre of Disc	...	Tropical Fresh Water Freeboard	...
Fresh Water Line	"	Fresh Water	"
Tropical Line	"	Tropical	"
Winter Line	below	Winter	"
Winter North Atlantic Line	"	Winter North Atlantic	"

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
		Upper dk.	Bridge Dk.	Upper dk.	Upper dk.	Bridge Deck.	Bridge Deck.	Coaling Top	Upper dk.	
Description of Hatchway		No.1.	No.2.	No.3.	No.4.	No.5.	No.3.	Bunker Hatches	Bunker Hatches	Coal Hatch
Dimensions of Hatchway		31'6" x 20'0"	33'0" x 20'0"	24'9" x 18'0"	33'0" x 20'0"	33'0" x 20'0"	18'6" x 20'0"	20'8" x 4'0"	20'5" x 4'0"	6'0" x 17'9"
COAMINGS	Height above Deck	51"	51"	30"	48"	47"	18"	30"	30"	3'3" x 38"
	Thickness	4 1/4"	4 1/4"	4 1/4"	4 1/4"	4 1/4"	4 1/4"	50"	50"	9"
	Sides	4 1/4"	4 1/4"	4 1/4"	4 1/4"	4 1/4"	4 1/4"	50"	50"	3 1/2"
	Ends	4 1/4"	4 1/4"	4 1/4"	4 1/4"	4 1/4"	4 1/4"	50"	50"	3 1/2"
Stiffeners		7 x 3 B.A.	30	1 and 2 steel trunks	2 plate Ahts 1.6 x 3 1/2 L.	30	✓	✓	✓	13.2
Brackets, Stays		30	6 x 3 1/2 x 38 L	✓	✓	✓	✓	✓	✓	✓
HATCH BEAMS	Number	5	5	1 and 2	5	5	3	✓	✓	✓
	Spacing	5'3"	5'6"	2 steel trunks	5'6"	5'6"	4'7 1/2"	✓	✓	✓
	Scantling and Sketch	Plate 19'6" x 15' x 36"	Plate 19'6" x 15' x 37"	13'6" x 9 1/2" x 36"	Plate 19'6" x 14' x 37"	Plate 19'6" x 14' x 37"	Plate 19'6" x 15' x 36"	✓	✓	✓
	Bearing Surface	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	✓	✓	✓
FORE AND AFTERS	Number									
	Spacing									
	Unsupported Lengths									
	Scantling* and Sketch									
Bearing Surface										
HATCH COVERS	Material	W.P.	W.P.	W.P.	W.P.	W.P.	W.P.	W.P.	W.P.	W.P.
	Thickness	3"	3"	3"	3"	3"	3"	3"	3"	2 1/2"
	How fitted	Fra.	Fra.	Fra.	Fra.	Fra.	Fra.	T.	T.	Fra.
	Bearing Surface	3.4 x 8	3.4 x 8	3.4 x 8	3.4 x 8	3.4 x 8	3.4 x 8	3	3	2 1/2
Spacing of Cleats		24	24	24	24	26	26	16 x 26	16 x 24	22
Number of Tarpaulins		3	3	3	3	3	3	3	3	2
<p>*Are wood fore and afters steel shod at all bearing surfaces? <i>Yes.</i></p> <p>Are battens and wedges efficient and in good condition? <i>Yes.</i></p> <p>Are tarpaulins in good condition and in accordance with rule requirements? <i>Yes.</i></p> <p>Are lashings provided in accordance with rule requirements? <i>Yes.</i></p>										

Particulars of fiddle, funnel and ventilator coamings:— *Engine Room skylight steel of strong construction. Fiddle gratings filled with steel hinged covers. Funnel + vents in efficient condition.*

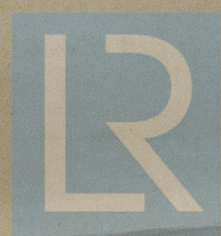
Particulars of Flush Bunker Scuttles:— *none.*

Particulars of Companionways:— *To accommodation in Bridge space amidships. In steel house. opening 4'8" x 1'10" 20" sill: 1 1/4" solid teak door operated from both sides. Poop. In strong steel house 5'10" high x 4'0" x 3'0" wide. opening 4'6" x 2'6" 18" sill: 1 1/4" solid teak door operated from both sides.*

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— *On Forecastle deck. 6 @ 6" dia. 36" high. 36 to vent raters. 2 @ 17" dia. 33" 40 to hold. On Bridge deck. 12 @ 6" dia. 30" high. 34 to accom. Poop. 8 @ 6" 30 34 raters. 2 @ 17" 30 38 holds. In wells. 4 as sketch. After well. 1 @ 1 1/2" dia. 30" high. 36 to tunnel. On Bridge deck. 2 @ 17" dia. 27" high. 38 to holds. 4 @ 22" 30 40. All nuts have wood plugs and canvas covers.*

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:— *4" dia air pipe from fore peak led overboard thru shell 18" below forecastle deck. In fore well. 1 @ 4" dia 18" to mouth to C.D.B. On Bridge deck 2 @ 4" dia 18" to mouth to C.D.B. 4 @ 3 1/2" 18" 4 @ 3 1/2" 16" 2 @ 3 1/2" 18" C.D.B. In after well. 2 @ 3 1/2" 18" 2 @ 3 1/2" 18" Efficient means of closing provided*

Particulars of Gangway Cargo and Coaling Ports:— *none.*



Particulars of Scuppers and Sanitary Discharge Pipes:—

1 Pipe scupper P.O. from Bridge Tween deck led to E.R. bilges

All sanitary discharges have storm valves at shell and are led overboard above freeboard deck.

Particulars of Side Scuttles:—

Sidelights to accommodation stairs in Poop, Bridge and Forecastle spaces have strong metal deadlights, hinged.

Particulars of Guard Rails:—

Forecastle deck: Rails 3'-2" high: 2 Rods: stanchions spaced 5'-6" apart.
Bridge " " 3'-6" " 3 " " 5'-0"
Poop " " 3'-3" " 2 " " 5'-3'6"5'6"

Particulars of Gangways, Lifelines, etc.:—

None.

Crews food raft.

Suitable provision made for rigging lifelines which are available for use in any part of the ship which might 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	113'-0"	3'-6"	4'-6" x 8"	9.	27 $\frac{1}{2}$	22.6 $\frac{1}{2}$
Forward Well	102'-0"	3'-5"	4'-6" x 8"	7	21 $\frac{1}{2}$	20.4 $\frac{1}{2}$
State position of each freeing port } After Well:— From Base Bld. 11'-0": 23'-0": 34'-9": 46'-6": 58'-4": 70'-8": 82'-8": 93'-2": 105'-6": 18' ab. dk. (F. and A. position and height above deck edge) } Forward Well:— " " " 8'-10": 18'-6": 20'-0": 40'-6": 60'-6": 73'-0": 83'-6": 16' above dk. State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— open ports: no shutters: no rods: Additional area where sheer is less than standard.						

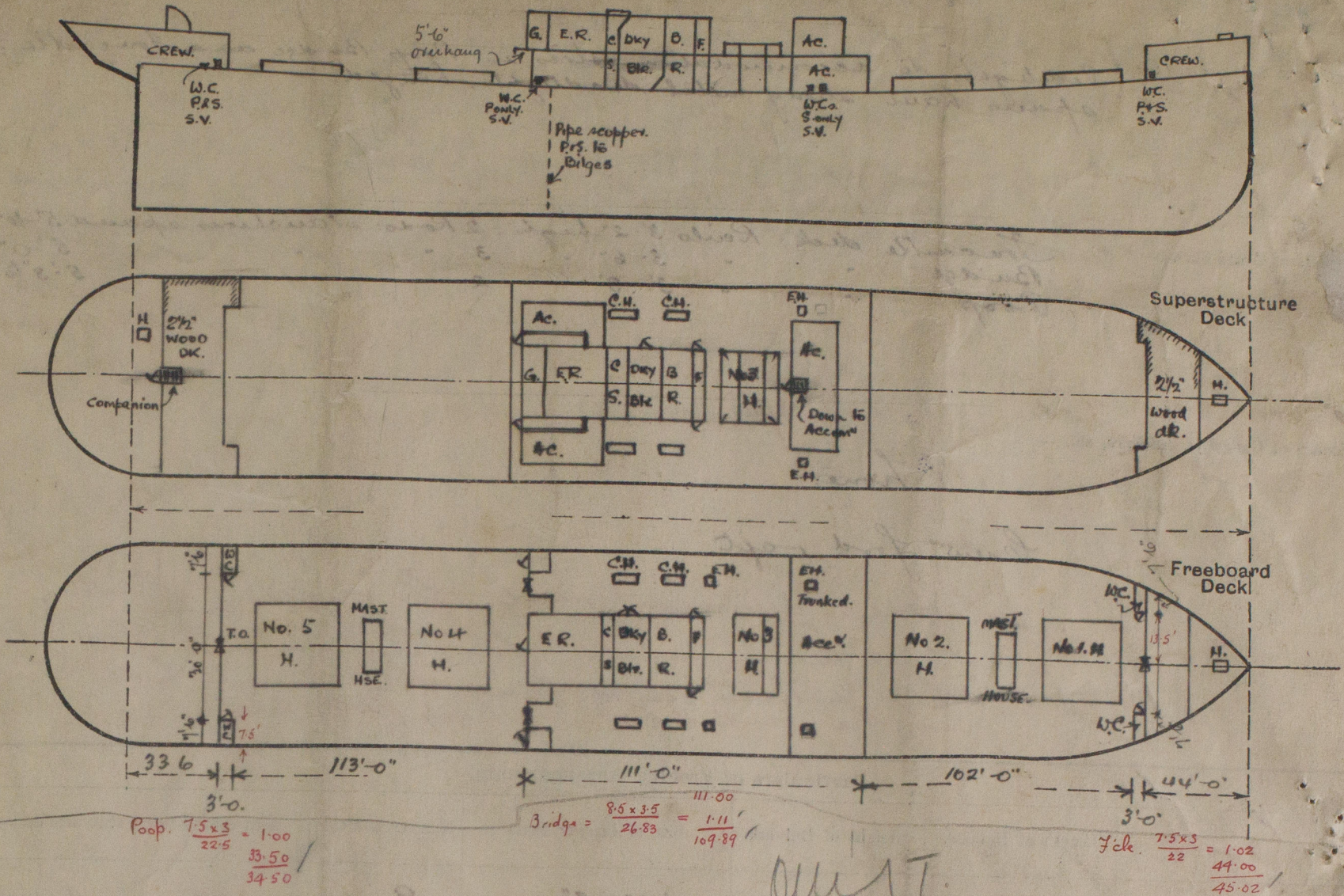
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ... ..	.40	.36	5 1/2 x 3 x 40 B.A.	24"	Lugs T. & B.	1 @ 4'-6" x 3'-1" 2 @ 4'-5" x 1'-11"	18"	8'-0"
Raised Quarter Deck Bulkhead ...	✓							
Bridge, After Bulkhead	✓	.30	3 1/2 x 3 x 32'	37"	none.	2 @ 4'-6" x 3'-0" 3 @ 4'-5" x 2'-0"	18"	8'-0"
Bridge, Forward Bulkhead ... ..	.44	.40	9 x 3 1/2 x 40 L	30"	Lugs T. & B.	none	✓	8'-0"
Forecastle Bulkhead ... ..	.36	.32	3 x 3 x 24" 3 1/2" flanges.	30" x 36"	none.	1 @ 4'-6" x 3'-1" 2 @ 4'-5" x 1'-11"	18"	8'-0"
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	After end engine casing forms part Bridge after Bulkhead.							
Exposed Machinery Casings on Superstructure Decks ... ..	.36	.30	3 1/2 x 3 x 34'	27. 33 x 39"	none.	2 @ 4'-6" x 2'-3" 2 @ 4'-5" x 2'-3"	18"	8'-0"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... ..	.40	.32	3 1/2 x 3 x 34'	27. 33 x 39"	none.	1 @ 8'-0" x 4'-9"	18"	8'-0"
Deckhouses on Flush Deck Ships ...	✓							

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

Poop Bulkhead	1 with 3" weather boards in full height wind channels. 2 - ordinary steel hinged doors operated from both sides.
Raised Quarter Deck Bulkhead ...	✓
Bridge, After Bulkhead	2 with 3" weather boards in full height wind channels. 3 - ordinary steel hinged doors operated from both sides (One admits to E.R.).
Bridge, Forward Bulkhead	Intact.
Forecastle Bulkhead	1 with 3" weather boards in full height wind channels. 2 with ordinary steel hinged doors operated from both sides.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	
Exposed Machinery Casings on Superstructure Decks	Ordinary steel hinged doors operated from both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	2 ordinary steel hinged doors to Holey operated from both sides. 1 double hinged steel door to Donkey Bl. Room secured by dogs, operated from inside.
Deckhouses on 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:—



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

Additional Hatches.

Forecastle deck. 3'6" x 4'0": 28" high. 40.
Covers. 2 1/2". T. Bearing surface 3".
2 Tarpsaulins. Cleats 24"

Upper deck to 7. Peak store
3'6" x 4'0": Coaming 9 x 3 B.A.
Covers. 2 1/2". T. Bearing surface 3".
Cleats 24". 2 Tarpsaulins.

On Bridge deck. Escape Hatches
Trunked thro' lower dks.
2 @ 2'5" x 2'5": Coaming 27" x 38.
Covers. 2 1/2". T. Bearing surface 2 1/2".
Cleats 16": 2 Tarpsaulins.

On Poop deck to star.
3'8" x 3'5": Coaming 18" x 38.
2 1/2" covers. T. 2 1/2" Bearing surface.
Cleats 3'4" x 28" + locking bar.
2 Tarpsaulins.

On Upper deck.
Bunker hatches
2 @ 5'3" x 4'3": 9 x 3 B.A.
2 1/2" covers. T. 3" Bearing surface.
24" cleats. 2 Tarpsaulins.

On Upper deck.
Escape Hatches
2 @ 24" x 24": 9 x 3 B.A.
3/8" steel hinged cover.
secured by toggles.

No timber assignment required.

Vessel measured in dry dock when she is completing special survey.

Builder's name and yard number *Short Bros Ltd Sunderland.*

Names of sister ships

Owners *Carlton S. S. Co Ltd*

Fee £ *13* : *12* : *0* Received by me



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Foundation