

17 SEP 1932

Rpt. C.11.

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Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

GLASGOW REPORT No. 52894

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having Roop, Bridge and Telt.

Port of Survey Glasgow.

Date of Survey 15th Sept 1932

Name of Surveyor James R. Lelark.

Particulars of Classification 100 A1

Ship's Name HISTORIAN
Nationality and Port of Registry British JAPANESE
Official Number 117290
Gross Tonnage 5074
Date of Build 1924
Moulded Dimensions: Length 393.92 Breadth 52.24 Depth 30.5
Moulded displacement at moulded draught = 85 per cent. of moulded depth 11923 tons
Coefficient of fineness for use with Tables .781

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... <u>30.5</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(30.54 - 26.26) 3 = + 12.84</u>	Moulded Breadth (B) <u>52.29</u>
Stringer plate <u>16.0</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{12.55}{50}$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <u>13</u>
Depth for Freeboard (D) = <u>30.54</u>		Difference <u>.45</u>
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.45}{4} \times .4834 = -.05$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>31.0</u>	<u>31.00</u>	<u>1' 11 1/2"</u>		<u>37.00</u>
" overhang ...	<u>.5</u>	<u>.25</u>	<u>1' 3" rounded</u>		<u>.25</u>
R.Q.D. enclosed ...					
" overhang ...	<u>121.64</u>	<u>64</u>			<u>64</u>
Bridge enclosed ...	<u>128.25</u>	<u>121.42</u>	<u>7' 11 1/2"</u>		<u>121.42</u>
" overhang aft ...	<u>6.85</u>	<u>5.12</u>			<u>5.12</u>
" overhang forward ...	<u>.25</u>	<u>.12</u>			<u>.12</u>
F'cle enclosed ...	<u>39.42</u>	<u>39.42</u>	<u>1' 11 1/2"</u>		<u>39.42</u>
" overhang ...	<u>.25</u>	<u>.12</u>			<u>.12</u>
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	<u>205.92</u>	<u>203.40</u>			<u>203.40</u>

Standard Height of Superstructure 4.44
" " R.Q.D. "
Deduction for complete superstructure 41.59
Percentage covered $\frac{S}{L} = \frac{52.29}{51.66} = 51.66\%$
Percentage from Table, Line A. 34.66%
(corrected for absence of forecastle (if required))
Percentage from Table, Line B. 34.66%
(corrected for absence of forecastle (if required))
Interpolation for bridge less than .2L (if required)
Deduction = 41.59 x .3786 = - 15.68

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>49.39</u>	1		<u>49.39</u>	<u>53.0</u>	<u>53.00</u>	1		<u>53.00</u>
1/4 L from A.P. ...	<u>21.98</u>	4		<u>87.92</u>	<u>23.0</u>	<u>22.91</u>	4		<u>91.64</u>
1/2 L " ...	<u>5.44</u>	2		<u>10.88</u>	<u>5.5</u>	<u>5.72</u>	2		<u>11.44</u>
Amidships ...		4			<u>0</u>		4		
3/4 L from F.P. ...	<u>10.87</u>	2		<u>21.74</u>	<u>11.5</u>	<u>12.63</u>	2		<u>25.26</u>
1/4 L " ...	<u>13.95</u>	4		<u>175.80</u>	<u>49.5</u>	<u>50.55</u>	4		<u>202.20</u>
F.P. ...	<u>98.78</u>	1		<u>98.78</u>	<u>118</u>	<u>118.00</u>	1		<u>118.00</u>
Total ...				<u>1444.51</u>					<u>501.54</u>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{57.03}{18} \left(.75 - .2614 \right) = - 1.55$
If limited on account of midship superstructure. If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Deduction for Tropical Freeboard.
Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 30.54
Summer freeboard = 5.84
Moulded draught (d) = 24.64

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.14 = 6 1/4
Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

Tons per inch immersion at summer load water line

T =

Deduction = $\frac{\Delta}{40 T}$ inches = 7.21 at 25' draft = 11.8
at 25' draft = 11.6
at 25' draft = 10.92

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction ... 12.84
Deduction for superstructures ... 15.68
Sheer correction ... 1.55
Round of Beam correction05
Correction for Thickness of Deck amidships ...
Other corrections, scantlings, etc. ...

Summer Freeboard = 40.386

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		ON FBD. DECK.					BRIDGE DECK	Small Hatches:-
		1	2	3	4	5	3.	
Dimensions of Hatchway		22'6" x 17'	29'3" x 17'	13'6" x 17'	33'9" x 17'	22'6" x 17'	9' x 17'	Bt. D. E - 6'2" x 4'0"; F - 6'5" x 4'0"
COAMINGS	Height above Deck	30"	30"	18"	30"	30"	30"	18" beaming, 3" cover, 2 1/2" bearing;
	Thickness	.55"	.55"	.40"	.55"	.55"	.44"	Cleats @ 24" - 3 tarpaulins.
	Stiffeners	1" BA.	1" BA.	✓	1" BA.	1" BA.	✓	Abd & A+B, 4 1/2" x 5', 13" beamings.
	Brackets, Stays	✓	2 STAYS.	✓	2 STAYS.	✓	✓	C+D, 8'8" x 5' and 6'5" x 5' respectively.
HATCH BEAMS	Number	4	5	2	6	4	1	A, B, C+D have 3" covers laid F+A
	Spacing	4.5	4.88	4.5	4.82	4.5	4.5	2" bearing, cleats @ 24" and 1 Tarpaulin, NO BEAM.
	Scantling and Sketch	D = 14 x 34	15 x 34	14 x 34	14 1/2 x 34	14 x 34	12 x 30	Abd & in Tels 3' x 3', 6" beaming;
	Bearing Surface	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	2 1/2" cover, 2 1/2" bearing; Cleats @ 24", 1 Tarpaulin.
FORE AND AFTERS	Number							Poof in House, 3'4" x 3'4", 15" beam.
	Spacing							2 1/2" cover, 2" bearing
	Unsupported Lengths							no backing arrg.
	Scantling* and Sketch							Tell: 8'3" x 10' and 2'3" x 2'3".
HATCH COVERS	Material	W.P.	W.P.	W.P.	W.P.	W.P.	W.P.	Coaming 22" x 15" respectively
	Thickness	2 3/4"	2 3/4"	2 3/4"	2 3/4"	2 3/4"	2 3/4"	Efficiently bolted steel
	How fitted	F+A	F+A	F+A	F+A	F+A	F+A	covers to each.
	Bearing Surface	3"	3"	3"	3"	3"	3"	
Spacing of Cleats		24"	24"	26"	24"	24"	24"	
Number of Tarpaulins		3	3	1	3	3	3	
<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>Kingbolts fitted at N°3, 2, 4, 1, 5 on 1st dk and N°3 on Bt. D.</i></p> <p>Are lashings provided in accordance with rule requirements? <i>yes.</i></p>								

Particulars of fiddle, funnel and ventilator coamings:-
 Stokehold gratings covered by strong steel hinged cover.
 Fiddle, Funnel and Ventilators in efficient condition.
 Engine Room skylight of steel strongly constructed.
 Hatch to Gal Shoot: 5' x 17', 1" beaming, 2 1/2" cover laid F+A, 2 1/2" bearing, cleats spaced 24", 2 Tarpaulins.

Particulars of Flush Bunker Scuttles:-

NONE.

Particulars of Companionways:-

ON POOP leading to bow space, formed by deckhouse, 1 1/2" Wood door, operated both sides, 15" sill.
 ON BRIDGE, leading to Bt. No. 1, formed by deckhouse, 1 1/2" Wood door, operated both sides, 15" sill.

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

BRIDGE: 1 Vent 6 1/2" dia. Coaming 8' x 32" to Bt. No. 1
 4 " 18" " " 30 x 34 " Holds
 4 " 15" " " 30 x 36 " Bunkers
 2 " 7" " " 8 x 32 " P.O. Aft
 FCE: 2 Vents 9" dia. Coaming 18 x 34 to F.P. etc.
 2 " 22" " " 36 x 42 to Holds etc.
 FORDWELL 6 " 18" " " 48 x 36 " " " " COAMINGS
 AFT " 9 " 18 " " 48 x 36 " " " " STAYED.
 1 " 12" " " 48 x 36 " Tunnel
 Also 4 Derrick Ports on 1st dk and 2 on Bt. No. 1.
 POOP DECK Vents to Poop space only.
 Wood Plugs and Cam as covers supplied for closing coamings.

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

1 Airpipe on Tell, 6" to lip x 2" dia. to F.P.
 9 " " 1st dk 30" " x 2 1/2" " " D.B.
 8 " " Bt. " 30" " x 2 1/2" " " D.B.
 1 " " Poop " 9" " x 2" " " A.P.
 2 " on side of Derrick Ports in aft Well, 3 1/2" dia, 42" to lip to Dep tank.
 No rifting holes.
 Wood plugs supplied for closing air.

Particulars of Gangway Cargo and Coaling Ports:-

NONE.



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ars of Scuppers and Sanitary Discharge Pipes:— all scuppers and sanitary discharges, from enclosed spaces on 'bd. deck, which discharge overboard, fitted with storm valves at ship's side.

No overboard discharges from spaces below 'bd. &.

ars of Side Scuttles:— side scuttles below 'bd. & and in poop, B⁺ and 'cl. fitted with hinged deadlights.

all scuttles of substantial construction.

'bd. not affected by scuttles below 'bd. &, these are fitted to stow aft.

ars of Guard Rails:— Poop and 'cl; 3'6" high, 4 wds, stanchions 4'0" apart.


Bridge 3'6" bulwark, efficiently supported, no freeing ports but 12'0" open rails.

Steel bulwark 4'8" high on 'bd. dk in wells, efficiently supported.

ars of Gangways, Lifelines, etc.:—

Eyeplates have been fitted 1.15. on Poop, B⁺, and 'cl B⁺ds, to take 3½" manilla lifeline, and stanchions are fitted from the rigging to support the lifeline about its mid-length.

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 Well ...	98'6"	48"	40" x 16" 	5	20.35 $\frac{1}{2}$	19.75 $\frac{1}{2}$
ard Well ...	89'6"	48"	40" x 16" <i>do.</i>	5	20.35 $\frac{1}{2}$	17.95 $\frac{1}{2}$
te position of each freeing port ...	After Well:— AFT END 0" TO FORD SIDE — 21'3" 26' 52'3" 54' 66'3" } 12" above deck. and A. position and height above deck edge) Forward Well:— 5'6" 31'3" 36'3" 52' 62' }					
te whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:—	3 ports in each well have hinged shutters (with eyebolts), all ports have 1 hor. bar.					
ditional area where sheer is less than standard.						

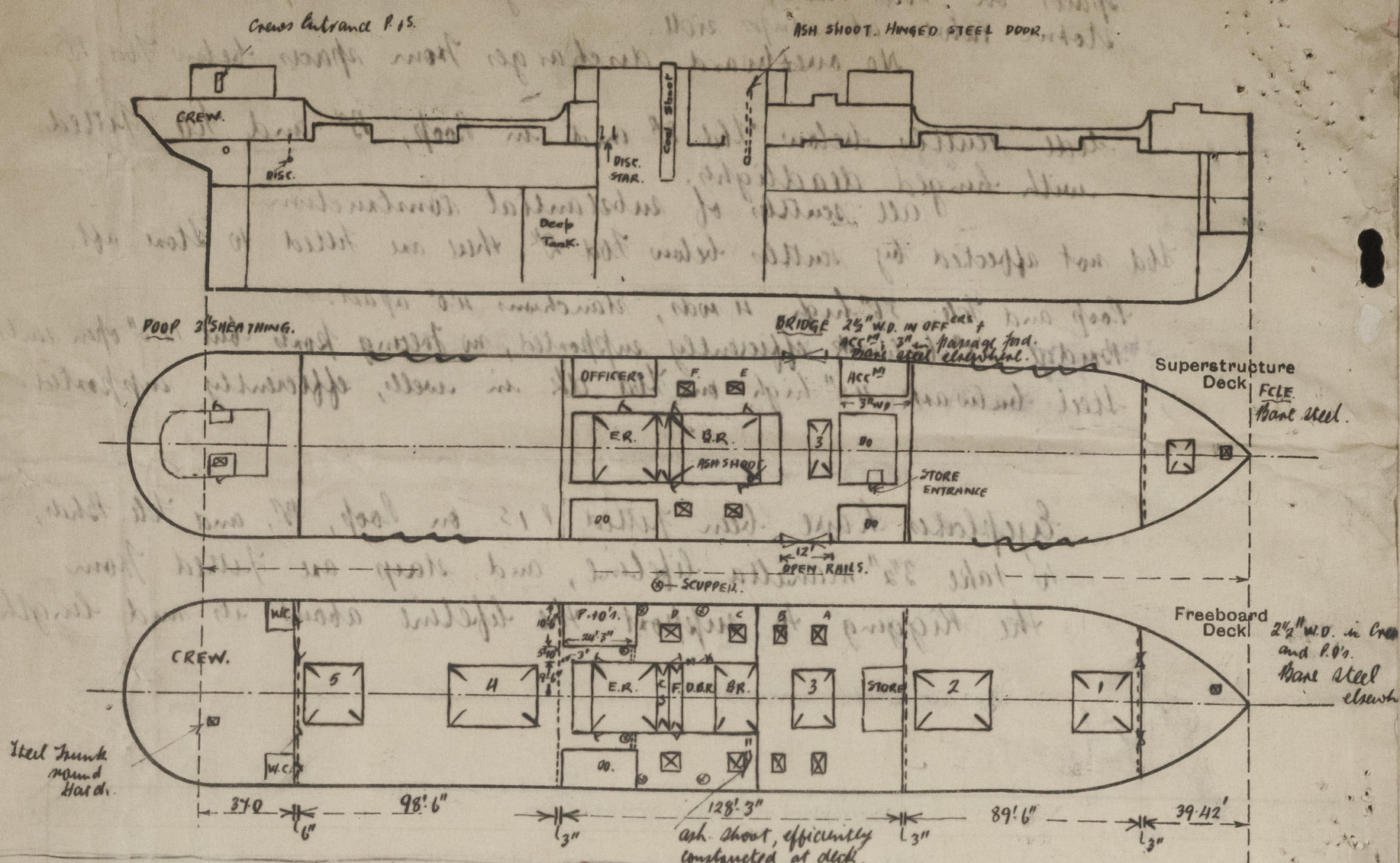
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
p Bulkhead ...	44	40	6 x 3 x 40A	30"		5' x 26"	18"	7' 11½"
sed Quarter Deck Bulkhead ...	✓							
lge, After Bulkhead ...	30"	26"	3 x 3 x 30A	30"	✓	5'10" x 3'4"	18"	7' 11½"
lge, Forward Bulkhead ...	44	40	8½ x 3 x 50BA	30"	B ⁺ ds top & bot	✓	✓	7' 11½"
castle Bulkhead ...	30"	26"	4 x 3 x 30A	36"	✓	5'8" x 3'3"	18"	7' 11½"
nk, Aft ...	✓							
nk, Forward ...	✓							
osed Machinery Casings on Free-board or Raised Quarter Deck ...	34	30	5 x 3 x 40	54"	attached to B ⁺ beams at top	5' x 2'	18"	7' 11½"
osed Machinery Casings on Super-structure Decks ...	34	30	3 x 3 x 34	36"	B ⁺ ds top	5' x 2'	18"	7' 6"
achinery Casings within Superstructures not fitted with Class I Closing appliances ...	34	30	5 x 3 x 40	54"	attached to B ⁺ beams at top	5' x 2'	18"	7' 11½"
khouses on Flush Deck Ships ...	✓					SEE ALSO SKETCH FOR OPENINGS TO B.R. THRO. DONKEY BLR RECESS.		

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

p Bulkhead ...	1½" Wood doors, manipulated both sides. ✓
ed Quarter Deck Bulkhead ...	✓
lge, After Bulkhead ...	Wood shifting boards, full height in riveted channels, stiffened by 3 x 3 x 50A fitted vertically at ex. of doors; also 1½" Wood doors to side houses.
lge, Forward Bulkhead ...	✓ <i>no openings</i>
castle Bulkhead ...	Wood shifting boards, full height in riveted channels, also provided with steel plates secured by hook bolts.
osed Machinery Casings on Free-board or Raised Quarter Deck ...	Hinged steel doors, capable of being manipulated both sides. ✓
osed Machinery Casings on Super-structure Decks ...	Hinged steel doors, capable of being manipulated both sides. ✓
achinery Casings within Superstructures not fitted with Class I Closing appliances ...	Hinged steel doors, capable of being manipulated both sides except those to Donkey Blr. Reass thence to B.R. for which see sketch. ✓
khouses 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:—



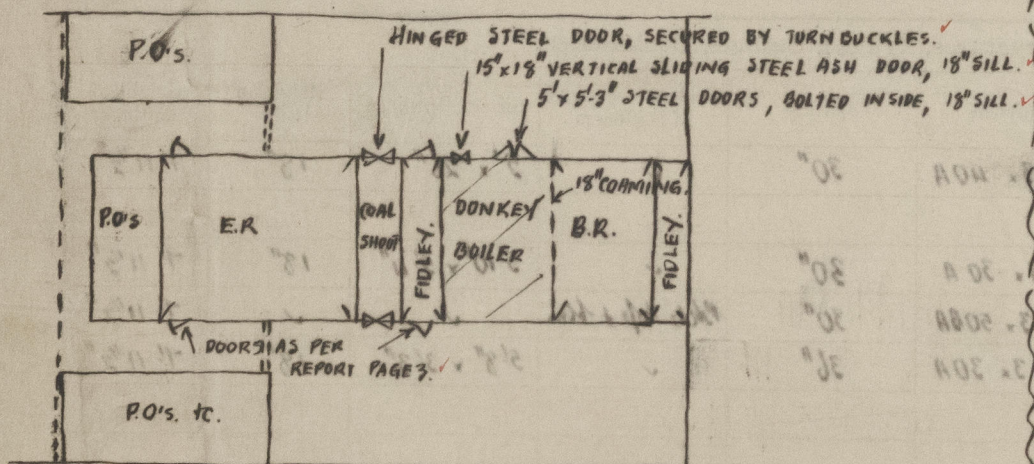
$$128 \frac{25}{100} \left\{ \frac{(24.25 \times 5.83) + (95 \times 3)}{15.83} \right\}$$

$$= 128 \frac{25}{100} \times 6.88 = 121.42 \quad D.H. = 6.88 + 25 = 6.83$$

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

The survey was carried out afloat and was confined to the items detailed in this Report.

SKETCH OF MCHY. CASING & IN BRIDGE



Builder's name and yard number

B. Connell & Coy. Ltd. No 400.

Names of sister ships

Wanderer, Wayfarer, Counsellor and Comedian.

Owners

Charente S.S. Co. Ltd. (T. and J. Harrison)

Fee £

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