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Index. No. 15598
(For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having *Raised Quarter deck, Bridge + Forecastle*

Ship's Name *Abercraig*
Nationality and Port of Registry *British Dundee*
Official Number *110995*
Gross Tonnage *440*
Date of Build *1902-4*
Moulded Dimensions: Length *153.1* Breadth *25.0* Depth *12'-2"*
Moulded displacement at moulded draught = 85 per cent. of moulded depth
Coefficient of fineness for use with Tables *.737* *834* tons

Port of Survey *Hayle*Date of Survey *4.10.32*Name of Surveyor *A. Scullard + R. Choffett*Particulars of Classification *#100 A.1.*

Depth for Freeboard (D)
Moulded depth ... *12.14*
Ringer plate ... *.03*
Nothing on exposed deck
 $T \left(\frac{L-S}{L} \right) =$
Depth for Freeboard (D) = *12.20*

Depth correction
(a) Where D is greater than Table depth
(D - Table depth) R =
 $(12.20 - 10.21) \times 1.178 = + 2.34$
(b) Where D is less than Table depth (if allowed)
(Table depth - D) R =
If restricted by superstructures ☒

3.5 off 2nd No. 3-7.27
Round of Beam correction
Moulded Breadth (B) *25.0*
Standard Round of Beam = $\frac{B \times 12}{50} = 6.00$
Ship's Round of Beam = *6.74*
Difference *.74*
Restricted to
Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.74}{4} \times (1 - .7452) = -.02$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<input checked="" type="checkbox"/>				
" overhang ...	<input checked="" type="checkbox"/>				
R.Q.D. enclosed ...	<i>82.80</i>	<i>82.80</i>	<i>3'-4"</i>	<i>3.354</i>	<i>82.28</i>
" overhang ...	<input checked="" type="checkbox"/>				
Bridge enclosed ...	<i>11.33</i>	<i>11.33</i>	<i>7'-0"</i>		<i>11.33</i>
" overhang aft ...	<input checked="" type="checkbox"/>				
" overhang forward ...	<i>18.79</i>	<i>18.79</i>	<i>6'-6"</i>	<i>1.18</i>	<i>18.79</i>
Forecastle enclosed ...	<i>2.36</i>	<i>1.18</i>			<i>1.18</i>
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	<i>115.28</i>	<i>114.10</i>			<i>113.58</i>

Standard Height of Superstructure *6'*
" " R.Q.D. *3.354*
Deduction for complete superstructure *21.31*
Percentage covered $\frac{S}{L} = 75.30$
" " $\frac{S_1}{L} = 74.52$
" " $\frac{E}{L} = 74.19$
Percentage from Table, Line A.
(corrected for absence of forecastle (if required)) *68.16*
Percentage from Table, Line B.
(corrected for absence of forecastle (if required))
Interpolation for bridge less than 2L (if required)
Deduction = $21.31 \times .6816 = -14.52$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
...	<i>25.31</i>	1		<i>25.31</i>	<i>19.5</i>	<i>19.50</i>	1		<i>19.50</i>
at A.P. ...	<i>11.26</i>	4		<i>45.04</i>	<i>7.90</i>	<i>7.90</i>	4		<i>31.60</i>
" "	<i>2.78</i>	2		<i>5.56</i>	<i>1.95</i>	<i>1.95</i>	2		<i>3.90</i>
ships ...		4					4		
at F.P. ...	<i>5.57</i>	2		<i>11.14</i>	<i>5.80</i>	<i>5.78</i>	2		<i>11.56</i>
" "	<i>22.53</i>	4		<i>90.12</i>	<i>23.20</i>	<i>23.14</i>	4		<i>92.56</i>
...	<i>50.62</i>	1		<i>50.62</i>	<i>54.5</i>	<i>54.15</i>	1		<i>54.15</i>
Total ...				<i>227.79</i>					<i>213.27</i>

Correction = Difference between sums of products
 $\frac{227.79 - 213.27}{18} = \frac{14.52}{18} = .807$
limited on account of midship superstructure.

Mean actual sheer aft = *Deficient 72.74%*
Mean standard sheer aft = *67.43*
Mean actual sheer forward = *Excess*
Mean standard sheer forward = *72.74%*
Length of enclosed superstructure forward of amidships =
" " aft of " =
actual *5.80* *23.20* *54.50*
standard *5.57* *22.53* *50.62*
Difference *.23* *.67* *3.88*
 $\times \frac{22.74}{25}$ *.21* *.61* *3.53*
standard *5.57* *22.53* *50.62*
standard *5.78* *23.14* *54.15*
If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.

Correction for Tropical Freeboard.
Correction for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = *15.53*
Summer freeboard = *3.73*
Moulded draught (d) = *11.80*

Correction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = $\frac{11.80}{4} = 2.95 = 3$
Correction for Winter North Atlantic Freeboard (if required) = $+ 2 = 5$

Deduction for Fresh Water.

Displacement in salt water at summer load water line.

 $\Delta =$

Tons per inch immersion at summer load water line.

 $T =$ Deduction = $\frac{\Delta}{40 T}$ inches $= \frac{3}{40 \times 3} = .023$

TABULAR FREEBOARD corrected for Flush Deck (if required)

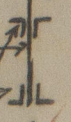
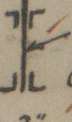


Correction for coefficient $\frac{237 + .680}{1.36} = \frac{1417}{1.36}$

	+	-
Depth Correction ...	<i>2.54</i>	
Deduction for superstructures ...		<i>14.52</i>
Sheer correction ...	<i>.30</i>	
Round of Beam correction ...		<i>.62</i>
Correction for Thickness of Deck amidships ...	<i>40.00</i>	
Other corrections, scantlings, etc. ...		
	<i>42.64</i>	<i>14.54</i>

Summer Freeboard = *4.70*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 ...	<i>5.4</i>	Tropical Fresh Water Freeboard ...	<i>3-8 3/4</i>
Fresh Water Line " " ...	<i>3</i>	Fresh Water " " ...	<i>3-3</i>
Tropical Line " " ...	<i>2.4</i>	Tropical " " ...	<i>3-5 3/4</i>
Winter Line " " ...	<i>3</i>	Winter " " ...	<i>3-6</i>
Winter North Atlantic Line " " ...	<i>5</i>	Winter North Atlantic " " ...	<i>3-11 3/4</i>

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS							
Description of Hatchway	No 1	R.Q. V ^k	Bumper Hatch.	Hatch.	after Peak	
Dimensions of Hatchway	23'-0" x 14'-0"	17'-6" x 14'-0"	3'-6" x 15'-9"	2'-0" x 2'-0"		
COAMINGS	{ Height above Deck ... Thicknes { Sides ... { Ends ... Stiffeners ... Brackets, Stays ...	30" 3/8" none 2 struts	48" 3/8" 1/2" none 2 stays	8' x 3" B.A. 7'-8" above above R.Q. V ^k	7' x 3" B.A.		
HATCH BEAMS	{ Number ... Spacing ... Scantling and Sketch	2 7'-2" x 7'-0" + 8'-10" 	1 8'-9" 	home.			
FORE AND AFTERS	{ Number ... Spacing ... Unsupported Lengths ... Scantling* and Sketch	(3) 1 Centre + 2 sides 3'-6" see above 7' x 5" 	+ 2 sides (3) 1 Centre + 2 sides 3'-6" see above 7' x 6" 	home.			
HATCH COVERS	{ Material ... Thickness ... How fitted Bearing Surface	Pine 3" Althwart 2"	Pine 3" Althwart 2"	Pine 2 1/2" F + A 2 1/2" 20"	Steel 3/8" Bolled corn.		
Spacing of Cleats	22"	22"	1			
Number of Tarpaulins	3	3				

*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:—
 Fiddle & funnel ventilators in efficient condition.
 Engine Room Skylight of wood strongly constructed.

Particulars of Flush Bunker Scuttles :—

home.

Particulars of Companionways :—

Engine Room + stokehold steel doors manipulated both sides

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

<u>Forward Well</u>	1-12" dia.	Coaming	26" + $\frac{3}{8}$ "	to No. 1 hold.
<u>Raised Quarter deck</u>	1-12" dia	"	24" + $\frac{3}{8}$ "	to No. 2 hold.

All vent coamings covered with wood plugs & canvas.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:— Forecastle 1-3" dia. 6" high to Fore peak

Raised Quarter deck. 2 - 2½" dia. 6" high to B/B tanks
2 - 1¼" " 5" " to after peak tank

Canvas covers!

Particulars of Gangway Cargo and Coaling Ports:—

None.

particulars of Scuppers and Sanitary Discharge Pipes:—
Forward Quarter Deck. 2 P.S. through Gunwale bar.
Sanitary Discharges. 1 Port side Side above deck
 1 " " Aft 4 ft below R.Q. Deck } Single Valves.

—iculars of Side Scuttles:—

2 P+S ~~lower~~ Ice 10' dia.
2 P+S Bridge 10' dia.

Scalars of Guard Rails :—

File. 2 Rails *stanchions* 3'-0" high. 4'-0" apart.

culars of Gangways, Lifelines, etc. :—

1 line of stanchions + life line fitted on Port side
of No. 1 hatch in riveted sockets on Latch coaming.

Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
Well ... <i>P.O.D.</i> ...	<i>82'-9"</i>	<i>3'-1"</i>	<i>11'-9"</i> <i>2 @ 2'-4" x 1'-6"</i> <i>1 @ 2'-5" x 1'-7"</i> <i>2 @ 4' x 9'-7"</i>	<i>2</i>	<i>10-79</i>	<i>16-5</i> ✓
ard Well	<i>38'-0"</i>	<i>3'-4</i>	<i>2'-4" x 1'-6"</i>	<i>3</i>	<i>10-485</i>	✓ <i>10-3</i>

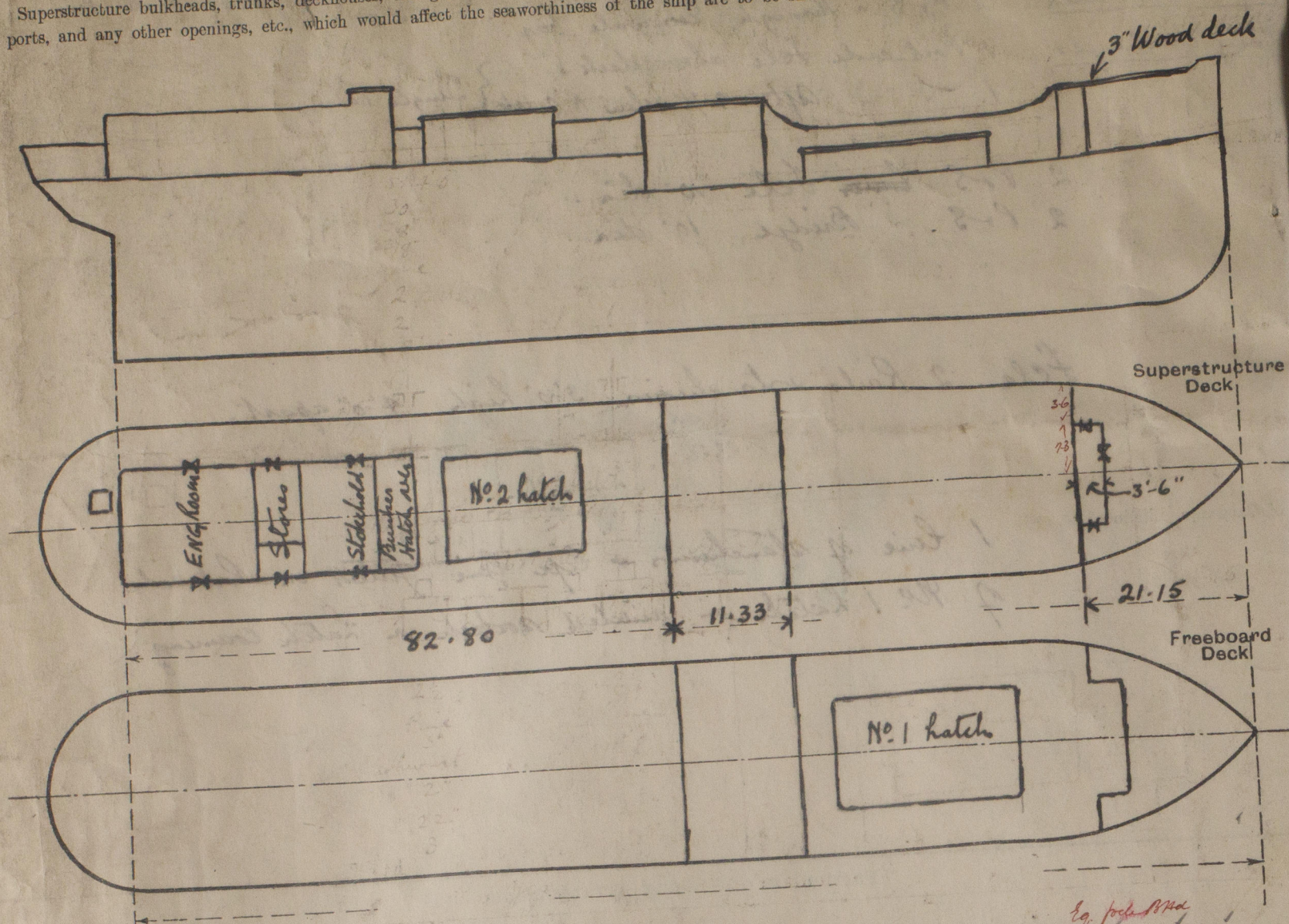
e position of each freeing port } After Well:— *3'-17'-0" from bridge, 15'-0" between + 10'-0" between ports.*
 and A. position and height above deck edge) } Forward Well:— *8'-3'-6" " " 11'-0" " + 10'-10" " "*
 e whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— *Shutters.*

itional area where sheer is less than standard.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Bulkhead	✓	✓	✓	✓	✓	✓	✓	✓
Quarter Deck Bulkhead ... }	✓	✓	✓	✓	✓	✓	✓	✓
After Bulkhead ...	✓	5/16"	<i>not accessible</i>		✓	none	✓	✓
Forward Bulkhead ...	5/16"	5/16"	5"x3"x7/20"	30"	<i>Bkls. top & bottom</i>	none	✓	3'-4"
Castle Bulkhead	5/16"	5/16"	3"x3"x3/8"	30"x24"	none	4'-4"x2'-0"	18"	6'-6"
Aft	✓	✓	✓	✓	✓	✓	✓	✓
Forward	✓	✓	✓	✓	✓	✓	✓	✓
Machinery Casings on Freed or Raised Quarter Decks ...	7/16"	5/16"	3"x2 1/2"x5/16"	24"	<i>Bkls. Top</i>	4'-8"x2'-0"	18"	7'-0"
Machinery Casings on Super- structure Decks	✓	✓	✓	✓	✓	✓	✓	✓
Machinery Casings within Superstruc- tures not fitted with Class I Closing Devices	✓	✓	✓	✓	✓	✓	✓	✓
Casings on Flush Deck Ships ...	✓	✓	✓	✓	✓	✓	✓	✓

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Bulkhead	✓
Quarter Deck Bulkhead ...	✓
After Bulkhead	✓ } <i>no openings</i>
Forward Bulkhead	✓ <i>no openings</i>
le Bulkhead	✓
Machinery Casings on Free- or Raised Quarter Decks ...	<i>Steel hinged door in halves manipulated from both sides.</i>
Machinery Casings on Super- ire Decks	<i>Steel hinged doors manipulated from both sides</i>
y Casings within Superstruc- ot fitted with Class I Closing nces	✓
nces	✓
ses on Flush Deck Ships ...	✓

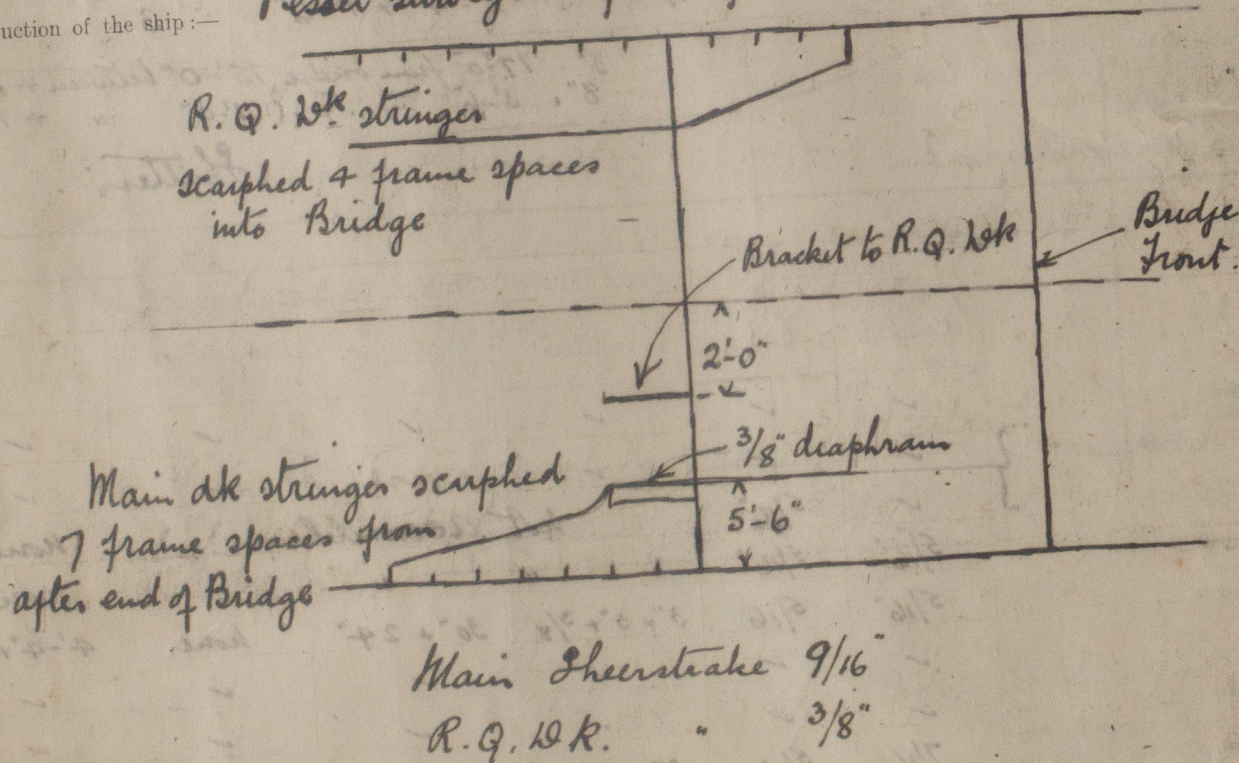
Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shewn on the following sketches:—



Eg. $\frac{7.25 \times 3.5}{10.75} = 2.36$
 $21.15 - 2.36 = 18.79$
 only = 2.36

Vessel surveyed afloat for Freeboard only.

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



Builder's name and yard number Glenlee Shipbuilders' Co. Ltd.

Names of sister ships This report refers to S.S. "Abercraig"

Owners County of Cornwall Shipping Co. Ltd. (J. Hampton Mgr.)

Fee £ 5 : 2 : 0

Received by me

Expenses 6 - 3



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