

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Launch Report No. 20005.

Computation of Freeboard for ~~Steamer, Sailing Ship, Tanker~~ **MOTORSHIP**
 having **RAISED QUARTER DECK & FORECASTLE**

(Type of Superstructures.)

Port of Survey **GREENOCK**

Date of Survey **WHILE BUILDING**

Name of Surveyor **Kenneth Inglis**

Particulars of Classification **100 A.1. (CONTEMPLATED)**

Ship's Name **"ACCRUITY"**

Nationality and Port of Registry **BRITISH LONDON**

Official Number **164548**

Gross Tonnage **APPROX. 450**

Date of Build **Now BUILDING.**

Moulded Dimensions: Length **150.5'** Breadth **27.5'** Depth **9.92'**

Moulded displacement at moulded draught = 85 per cent. of moulded depth **767** tons

Coefficient of fineness for use with Tables **769**

Depth for Freeboard (D)

Moulded depth ... **9.92'**

Stringer plate ... **3.75"** ... **.03**

Sheathing on exposed deck

$T \left(\frac{L-S}{L} \right) =$

Depth for Freeboard (D) = **9.95'**

Depth correction

(a) Where D is greater than Table depth (D-Table depth) R =

(b) Where D is less than Table depth (if allowed) (Table depth-D) R = **(10.03-9.95) x 1.157 = -.09**

If restricted by superstructures **yes. Nil.**

Round of Beam correction

Moulded Breadth (B) **27.5'**

Standard Round of Beam = $\frac{B \times 12}{50} =$ **6.60**

Ship's Round of Beam = **7.00**

Difference **.40**

Restricted to

Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.40^2}{4} \times \frac{2334}{150.5} =$ **-.02**

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 ...	97.17	97.17	3'-6"	✓	97.17
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
Fore enclosed ...	16'-17.40	17.40	7'-0"	✓	17.40
" overhang ...	3'-1.60	.80			.80
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward					
Total ...	116.17	115.37			115.37

Standard Height of Superstructure **6.0'**

" " R.Q.D. **3.336'**

Deduction for complete superstructure **21.05**

Percentage covered $\frac{S}{L} =$ **77.19**

" " $\frac{S_1}{L} =$ **76.66**

" " $\frac{E}{L} =$ **76.66**

Percentage from Table, Line A. **71.19**
(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 = **21.05 x 71.19 = -14.98**

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	25.05	1	25.05	31 1/2 = 31.50	31.50	1	31.50
1/2 L from A.P. ...	11.15	4	44.60	16	16.00	4	64.00
1/2 L " ...	2.76	2	5.52	4	4.00	2	8.00
Amidships ...	-	4	-	0	-	4	-
1/2 L from F.P. ...	5.51	2	11.02	8	8.00	2	16.00
1/2 L " ...	22.29	4	89.16	25	25.00	4	100.00
F.P. ...	50.10	1	50.10	52	52.00	1	52.00
Total ...			225.45				271.50

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{46.05}{18} \left(.75 - \frac{38.60}{150.5} \right) =$ **-0.93**

If limited on account of midship superstructure.

Actual height of raised quarter deck = **3.500**

Standard " = **3.336**

1.164

1.97

(Actual sheer aft more favorable than parabolic line through sheer at A.P. + 1.97)

Length of enclosed superstructure forward of amidships = **.146L**

" " aft of " = **.5L**

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **13.45'**

Summer freeboard = **3.67'**

Moulded draught (d) = **9.78'**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = **2.44**Addition for Winter North Atlantic Freeboard (if required) = **2 1/2 + 2 = 4 1/2**

Deduction for Fresh Water.

Displacement in salt water at summer load water line **919**

$\Delta = 10' = 824 \text{ tons}$ **915**

Tons per inch immersion at summer load water line **9.75**

$T = 10' = 8.75$

Deduction = $\frac{\Delta}{40 T}$ inches = **2.61**

2 1/2 + 3/4

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction ...

Deduction for superstructures ...

Sheer correction ...

Round of Beam correction ...

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

	+	-
Depth Correction		
Deduction for superstructures		14.98
Sheer correction		0.93
Round of Beam correction		0.02
Correction for Thickness of Deck amidships	42.00	
Other corrections, scantlings, etc.		
	42.00	15.93
Summer Freeboard =	42.66	

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel Deck:

Tropical Fresh Water Line above Centre of Disc ... **2 3/4**

Fresh Water Line " " ... **2 3/4**

Tropical Line " " ... **Nil**

Winter Line below " " ... **2 1/2**

Winter North Atlantic Line " " ... **4 1/2**

Tropical Fresh Water Freeboard ... **3'-8"**

Fresh Water " " ... **3'-5 1/2"**

Tropical " " ... **3'-8"**

Winter " " ... **3'-10 1/2"**

Winter North Atlantic " " ... **4'-0 1/2"**

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway		No 1	No 2	HATCH TO CHAIN LOCKER ON MAIN DECK					
Dimensions of Hatchway		24'9" x 17'	34'6" x 17'	24" x 21"					
COAMINGS	Height above Deck	48"	39"	COAMING 24" x 30"					
	Thickness	.40	.40	COVERS 2 1/2" WOOD					
	Sides	.40	.40	BEARING 3"					
	Ends	.40	.40	CLEATS 18"					
Stiffeners		8 x 3/4 x 3/8 BA	8 x 3/4 x 3/8 BA	TARPABLINS 2					
Brackets, Stays		6 x 40 BA PL. 2 AT SIDES	3 AT SIDES, 1 AT AFT END						
HATCH BEAMS	Number	4	7	ESCAPE HATCH ON MAIN DECK			ESCAPE HATCH ON R.Q.DK.		
	Spacing	63"	63" x 42"	2' 0" x 21"			2' 0" x 21"		
	Scantling and Sketch	PL. 16 x 3/8	13 x 3/8	COAMING 18" x 30"			COAMING 18" x 30"		
		ANG. 3 1/2 x 3/4 x 42	3 1/2 x 3/4 x 42	FITTED WITH 30 STEEL			FITTED WITH 30 STEEL		
Bearing Surface		3" ✓	3" ✓	WATERTIGHT COVER WITH 8 TOGGLE BOLTS 14" APART			WATERTIGHT COVER WITH 8 TOGGLE BOLTS 14" APART.		
FORE AND AFTERS	Number								
	Spacing								
	Unsupported Lengths								
	Scantling* and Sketch								
Bearing Surface									
HATCH COVERS	Material	W.P.	W.P.						
	Thickness	2 1/2	2 1/2						
	How fitted	FORE & AFT							
	Bearing Surface	3"	3"						
Spacing of Cleats		24"	24"						
Number of Tarpaulins		2	2						

*Are wood fore and afters steel shod at all bearing surfaces? ✓
 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 EXTRA LASHING PROVIDED FOR OWING TO WIDTH OF HATCH ✓

Particulars of fiddle, funnel and ventilator coamings:—

FIDDLE FUNNEL & VENTILATOR COAMINGS EFFICIENT
 ENGINE ROOM SKYLIGHT OF STEEL STRONGLY CONSTRUCTED

Particulars of Flush Bunker Scuttles:— NONE

Particulars of Companionways:— NONE

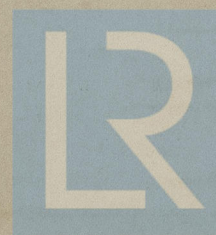
Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—

ONE 9" DIA VENT TO HOLD ON RAISED QUARTER DK 36" x 32" COAMING.
 ONE 9" DIA " " " " MAIN DECK 36" x 32" COAMING.
 VENTILATORS CONSTRUCTED IN ACCORDANCE WITH RULE REQUIREMENTS
 VENTILATORS FITTED WITH WOOD PLUGS & CANVAS COVERS.

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

ONE 2 1/2" M.I. AIR PIPE TO FORE PEAK TANK ON FORECASTLE 18" HIGH
 TWO 2" " " " " OIL FUEL BUNKER ON R.Q. DK 30" HIGH
 ONE 2 1/2" " " " " AFT PEAK TANK " " " 30" "
 AIR PIPES TO PEAKS FITTED WITH WOOD PLUGS
 " " TO OIL FUEL BUNKER FITTED WITH GANZE

Particulars of Gangway Cargo and Coaling Ports:— NONE



Particulars of Scuppers and Sanitary Discharge Pipes :-

STRINGER BAR CUT FOR WEATHER DECK SCUPPERS.
SANITARY DISCHARGES FITTED WITH C.S. STORM VALVES AT SHIPS SIDE & EFFICIENT TRAP
AT INNER END. ✓

Particulars of Side Scuttles :-

9" DIASIDE LIGHTS ON SHIPS SIDE IN FORECASTLE FITTED WITH HINGED DEADLIGHTS.
AND OF SUBSTANTIAL CONSTRUCTION. ✓

Particulars of Guard Rails :-

FORECASTLE DECK :- 2 RODS & STANCHIONS ABOUT 4'-6" APART, RAILS 3'-3" HIGH
RAISED QUARTER DECK -- STEEL BULWARK .25 THICK WITH 6x30 BULB PLATE ^{STAYS} SPACED 5 FEET, 39" HIGH.
MAIN DECK -- " " .25 " " 6x30 " " " 5 " , 42" " .

Particulars of Gangways, Lifelines, etc. :-

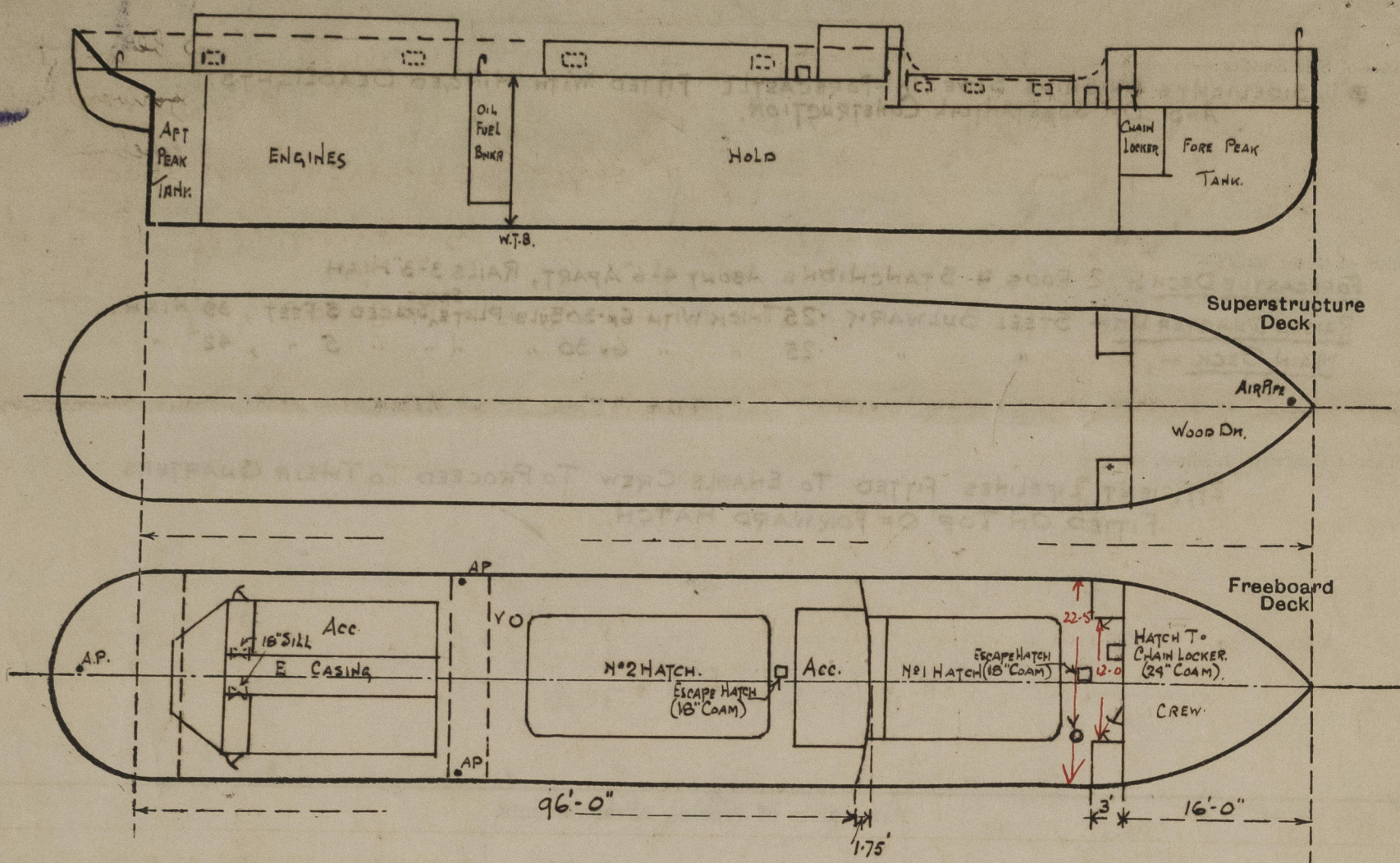
EFFICIENT LIFELINES FITTED TO ENABLE CREW TO PROCEED TO THEIR QUARTERS.
FITTED ON TOP OF FORWARD HATCH. ✓

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 ... (OPEN AT FRONT)	99'	39"	2'-9" x 1'-6"	4	16.50	19.8 if a well.
Forward Well ...	35'	42"	2'-6" x 1'-6"	3	11.25	10.00
State position of each freeing port ... } After Well :- 25', 47', 67' & 87' AFT OF BREAK (3 1/2" ABOVE DECK) (F. and A. position and height above deck edge) } Forward Well :- 5', 15' & 25' FOR OF BREAK (12" ABOVE DECK) State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :- FITTED WITH ONE HORIZONTAL RAIL. 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
Peep Bulkhead ...								
Raised Quarter Deck Bulkhead ...	.30	.30	2 1/2 x 2 1/2 x .25 COVERED BY HATCH	DIAPHRAGM AT SIDE 33	NONE	NONE	✓	3'-6"
Bridge, After Bulkhead ...								
Bridge, Forward Bulkhead ...								
Forecastle Bulkhead ...	.25	.25	2 1/2 x 2 1/2 x .25	30"	NONE	4'-6" x 2'-0"	24"	7'-0"
Trunk, Aft ...								
Trunk, Forward ...								
Exposed Machinery Casings on Deck board or Raised Quarter Decks ...	.30	.26	3 x 3 x .30	30"	NONE	NONE	✓	6'-6"
Exposed Machinery Casings on Super- structure Decks ...								
Machinery Casings within Superstruc- tures 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).	
Peep Bulkhead ...	
Raised Quarter Deck Bulkhead ...	NO OPENINGS ✓
Bridge, After Bulkhead ...	
Bridge, Forward Bulkhead ...	
Forecastle Bulkhead ...	
Exposed Machinery Casings on Deck board or Raised Quarter Decks ...	STRONG WOOD DOOR CAPABLE OF BEING MANIPULATED FROM BOTH SIDES. ENTRANCE TO MACHINERY SPACE THROUGH DECKHOUSE. STEEL DOOR MANIPULATED FROM BOTH SIDES IN DECKHOUSE WITH 24" SILL & 18" SILL AT OPENINGS IN CASING.
Exposed Machinery Casings on Super- structure Decks ...	
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances ...	
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 shewn on the following sketches:—



State any special features in the construction of the ship:— This vessel has been built in accordance with the approved plans, & in general conformity with the Society's rules for the class contemplated. The vessel is to be engaged on international trade. Timber freeboards is not required. Approved plans of midship section, profile & decks & deck plan are forwarded for reference. Freeboard request attached.

$$\begin{array}{r}
 \text{R. Q. Deck} \\
 1.75 \times \frac{2}{3} = 1.17 \\
 96.00 \\
 \hline
 97.17 \text{ equivalent}
 \end{array}$$

$$\begin{array}{r}
 \text{Forecastle} \\
 \text{hatches} \frac{12 \times 3}{22.5} = 1.60 \\
 19.00 \\
 \hline
 17.40
 \end{array}$$

Builder's name and yard number GEO BROWN & CO YARD No 190

Names of sister ships M. V. Angularity, Geo Brown No 187, is a similar vessel

Owners FREDERICK T. EVERARD & SONS LTD

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Received by me

To BE RENDERED WITH FIRST ENTRY



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