

Lloyd's Register of Shipping.  
SURVEYS FOR FREEBOARD.

No 100111

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey <u>Liverpool</u>
having <u>RAISED QUARTER DECK</u> <u>BRIDGE DECK</u> & <u>FOCLE DECK</u>					Date of Survey <u>30th March &amp; subsequently</u>
(Type of Superstructures.)					Name of Surveyor <u>T.R. McIlvenna</u>
Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build	Particulars of Classification <u>+ 100 A.I.</u>
<u>HOLME FORCE</u>	<u>BRITISH WHITEHAVEN</u>	<u>134950</u>	<u>1216</u>	<u>1930</u> <u>2nd ho.</u>	
Moulded Dimensions: Length <u>215'</u> Breadth <u>34'</u> Depth <u>15.75'</u>					
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>2134</u> tons					
Coefficient of fineness for use with Tables <u>.463</u>					

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... .. <u>15.75'</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(15.75 - 14.33) 1.654 = + 2.42</u>	Moulded Breadth (B) <u>34.00</u>
Stringer plate ... .. <u>.04</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{8.16}{50} = 8.16$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ <u>✓</u>	If restricted by superstructures	Ship's Round of Beam = <u>8.16</u>
Depth for Freeboard (D) = <u>15.79</u>		Difference = <u>.84</u>
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.84}{4} \times .218 = -.02$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Peep enclosed ...					
" overhang ...					
R.Q.D. enclosed ...	<u>128'</u>	<u>128.00</u>	<u>4.25'</u>	<u>✓</u>	<u>128.00</u>
" overhang ...	<u>✓</u>				
Bridge enclosed ...	<u>13.12'</u>	<u>13.12</u>	<u>7.25'</u>	<u>✓</u>	<u>13.12</u>
" overhang aft ...	<u>✓</u>				
" overhang forward ...	<u>25.16'</u>	<u>25.16</u>	<u>7.25'</u>	<u>✓</u>	<u>25.16</u>
Fore enclosed ...	<u>25.16'</u>	<u>25.16</u>	<u>7.25'</u>	<u>✓</u>	<u>25.16</u>
" overhang ...	<u>1.86</u>	<u>1.86</u>			<u>1.86</u>
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	<u>140.00</u>	<u>168.14</u>			<u>168.14</u>

Standard Height of Superstructure	<u>6.00</u>
" " R.Q.D.	<u>3.464</u>
Deduction for complete superstructure	<u>24.50</u>
Percentage covered $\frac{S}{L} =$	<u>79.04</u>
" " $\frac{S_1}{L} =$	<u>78.20</u>
" " $\frac{E}{L} =$	<u>78.20</u>
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	<u>73.08</u>
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction =	<u>24.50 x .7308 = - 20.10</u>

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>31.50</u>	1		<u>31.50</u>	<u>43</u>	<u>45.80</u>	1		<u>47.80</u>
$\frac{1}{4}$ L from A.P. ...	<u>14.02</u>	4		<u>56.08</u>	<u>17.4</u>	<u>16.98</u>	4		<u>85.08</u>
$\frac{2}{4}$ L " ...	<u>3.46</u>	2		<u>6.92</u>	<u>5.4</u>	<u>4.24</u>	2		<u>10.52</u>
Amidships ...	<u>✓</u>	4		<u>✓</u>	<u>0</u>	<u>✓</u>	4		<u>✓</u>
$\frac{3}{4}$ L from F.P. ...	<u>6.93</u>	2		<u>13.86</u>	<u>10.12</u>	<u>8.39</u>	2		<u>16.78</u>
$\frac{1}{4}$ L " ...	<u>28.04</u>	4		<u>112.16</u>	<u>34.12</u>	<u>33.18</u>	4		<u>132.72</u>
F.P. ...	<u>63.00</u>	1		<u>63.00</u>	<u>83</u>	<u>81.00</u>	1		<u>81.00</u>
Total ...				<u>283.52</u>					<u>373.90</u>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{75-S}{2L} \right) = \frac{90.38}{18} \times \frac{.45-.3953}{.75} = -1.48$

If limited on account of midship superstructure.

Mean actual sheer aft = Excess  
Mean standard sheer aft = Excess

Mean actual sheer forward = Excess  
Mean standard sheer forward = Excess

Length of enclosed superstructure forward of amidships = 156  
" " aft of " = 50

Actual height of R.Q.D. = 4.25  
Standard " " " = 3.464  
" " " " = .483  
" " " " = .12  
" " " " = .5796 = 5.80

Sheer aft increased by virtue of intact Raised Quarter Deck having a height in excess of standard.

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)	25.40
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient	24.24
Depth to Freeboard Deck = <u>20.04</u>	$\Delta = 24.50$	Depth Correction ... .. <u>2.42</u>	
Summer freeboard = <u>4.90</u>	Tons per inch immersion at summer load water line	Deduction for superstructures ... .. <u>✓</u>	<u>20.10</u>
Moulded draught (d) = <u>15.14</u>	T = <u>15.0</u>	Sheer correction ... .. <u>✓</u>	<u>1.48</u>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>3.78 = 3.78</u>	Deduction = $\frac{\Delta}{40T}$ inches = <u>4.08 = 4</u>	Round of Beam correction ... .. <u>✓</u>	<u>.02</u>
Addition for Winter North Atlantic Freeboard (if required) = <u>2</u>		Correction for Thickness of Deck amidships ... .. <u>51.00</u>	
		Other corrections, scantlings, etc. ... .. <u>✓</u>	
		53.42 21.90 + 31.52	
		Summer Freeboard = <u>58.49</u>	

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

Tropical Fresh Water Line above Centre of Disc ...	<u>7.2</u>	Tropical Fresh Water Freeboard ...	<u>4' - 10 3/4"</u>
Fresh Water Line " " ...	<u>4</u>	Fresh Water " " ...	<u>4' - 3 3/4"</u>
Tropical Line " " ...	<u>3 3/4</u>	Tropical " " ...	<u>4' - 6 3/4"</u>
Winter Line below " " ...	<u>3 3/4</u>	Winter " " ...	<u>4' - 4"</u>
Winter North Atlantic Line " " ...	<u>5 3/4</u>	Winter North Atlantic " " ...	<u>5' - 2 1/2"</u>



# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS MAIN DECK R & DECK											
Description of Hatchway	...	...	N <sup>o</sup> 1.	N <sup>o</sup> 2							
Dimensions of Hatchway	...	...	39' x 22'	45' 5" x 22'							
COAMINGS	Height above Deck	...	4'-3"	3'-6"							
	Thickness	{ Sides	8/20	8/20							
		{ Ends									
	Stiffeners	...	7 1/2 B.A.	7 1/2 B.A.							
	Brackets, Stays	...	5" Bulb Plate Stays each side	7" Bulb Plate Stays each side							
HATCH BEAMS	Number	...	7	9							
	Spacing	...	5'-0" max	4'-10 1/2" max							
	Scantling and Sketch	...	4 1/2" x 3" x 4 1/2" 18 x 3/8 4 1/2" x 3" x 4 1/2"	as N <sup>o</sup> 1							
	Bearing Surface	...	3"	3							
FORE AND AFTERS	Number	...									
	Spacing	...									
	Unsupported Lengths	...									
	Scantling* and Sketch	...									
	Bearing Surface	...									
HATCH COVERS	Material	...	Pine								
	Thickness	...	2 1/2"								
	How fitted	...	F+A								
	Bearing Surface	...	3	as N <sup>o</sup> 1							
Spacing of Cleats	...	...	24								
Number of Tarpaulins	...	...	3								
*Are wood fore and afters steel shod at all bearing surfaces? <input checked="" type="checkbox"/> Are battens and wedges efficient and in good condition? <input checked="" type="checkbox"/> Are tarpaulins in good condition and in accordance with rule requirements? <input checked="" type="checkbox"/> Are lashings provided in accordance with rule requirements? <input checked="" type="checkbox"/>											

Particulars of fiddle, funnel and ventilator coamings:—

Funnel & ventilator coamings in efficient condition ✓  
Strong steel covers fitted over fiddle gratings ✓  
S.R. Skylight of steel strongly constructed ✓

Particulars of Flush Bunker Scuttles:—

None. ✓

Particulars of Companionways:— ENTRANCE TO ACCOMMOD<sup>o</sup> ON BRIDGE DECK (STARBOARD SIDE)

Opening 4' 10" x 24" 19" sill (above wood deck) ✓  
Efficient wood door operated from both sides. ✓

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

FOCLE DECK:— 2 @ 9 3/4 DIA 3'-0" COAMING 5/8 THICK TO HOLD ✓  
4 @ 6" " " " 5/16 " " CREW ✓  
MAIN DECK:— 2 @ 10" " " 3'-3" " 3/8 " " HOLD ✓  
R. QUARTER " 2 @ 15" " " 3'-0" " 3/8 " " " ✓  
all vents have wood plugs & canvas covers ✓

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

FOCLE DECK:— 1 CI 3" DIA 15" TO LIP 1/8 F. PEAK ✓ SNIFFING HOLE.  
1 " 4 " 18" " " " STORE ✓  
MAIN " 2 " 4 " 38" " " " N<sup>o</sup> 1 OIL TANK ✓  
R. Q. " 2 " 4 " 30" " " " N<sup>o</sup> 2 " " ✓  
1 " 4 " 15" " " " A. PEAK, SNIFFING HOLE. ✓  
where sniffing holes in air pipes kept to underside of bend.  
wood plugs fitted to all air pipes.

Particulars of Gangway Cargo and Coaling Ports:—

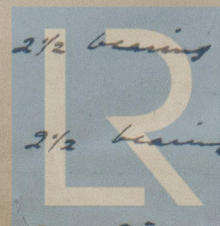
HATCH & SMALL HATCHES:—

COALING HATCH ON CASING TOP:— { 9'-3" x 22'-0" 9" Cmg 3/8 thick 3" wood covers 3" bearing cleats 22" apart  
2 Tarpaulins. ✓

ACCESS HATCH TO N<sup>o</sup> 1 HOLD:— { 20" x 23 1/2" 30" Cmg 5/16 thick 2 1/2" wood covers 2 1/2" bearing cleats 12" apart  
2 Tarpaulins ✓

ACCESS HATCH TO N<sup>o</sup> 2 HOLD:— { 24" x 17" 31" Cmg 3/8 thick 2 1/2" wood covers 2 1/2" bearing cleats 12" apart  
2 Tarpaulins ✓

HATCH TO A. PEAK:— 19 x 24" 5" Cmg 3/8 thick with Bolted Strong Steel manhole cover. ✓



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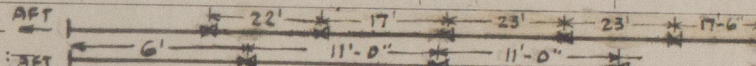
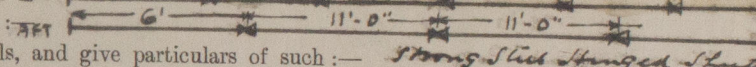
Particulars of Scuppers and Sanitary Discharge Pipes — all Scuppers & discharges are fitted with Storm valves at Ship's side ✓

Particulars of Side Scuttles: No Side Scuttles are situated below the main deck. Sidelights within Superstructures are of Substantial construction & fitted with deadlights. ✓

Particulars of Guard Rails: — FOOLE DECK: — 3'-0" high 2 Rods Stanchions spaced 5'-0" apart ✓

Particulars of Gangways, Lifelines, etc.: — FOR<sup>W</sup> WELL (Hinged)  
Gangway on Top of No. 1 Hatch with portable stanchions (fitted on lateral side shipping bulk angle) 6'-0" x 8'-0" apart with manilla rope (through top eye of stanchions) lashed to Joels & Bridge rails. A wooden Gangway is fitted from Hatch to Poop & Bridge ladders. ✓

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 ...	128'	4'-3"	36" x 26"	5	25.5 sq feet	25 3/5 sq feet ✓
Forward Well ...	45'	3'-3"	33" x 18"	3	12.40 "	11 " " ✓

State position of each freeing port ... After Well: —  → FORD 5" about 5th edge ✓  
(F. and A. position and height above deck edge) Forward Well: —  → FORD 12" " " ✓  
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: — Strong Steel Hinged Shutters ✓  
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 ...	✓	5/16 ✓	4 x 3 x 368A ✓	30" ✓	lugged 4-3/4" R. ✓	✓	✓	4'-3"
Bridge, After Bulkhead ...	✓	5/16 ✓	4 x 3 x 368A ✓	30" ✓	do. ✓	none ✓	✓	✓
Bridge, Forward Bulkhead ...								
Forecastle Bulkhead ...	✓	5/16 ✓	3 x 2 1/2 ✓	2'-6" x 2'-0" ✓	none ✓	4'-2 x 2'-0 4'-0 x 1'-11 ✓	22 1/2 ✓ 22 ✓	7'-3 7'-3
Trunk, Aft ...								
Trunk, Forward ...								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	3/8 ✓	5/16 ✓	4 x 3 ✓	30" ✓	Brackets Top ✓	4'-0 x 23" ✓ 4'-0 x 23" ✓ 29" x 24" ✓	22 ✓ 22 ✓ 36" ✓	7'-3" } 7'-3" } 7'-3" }
Exposed Machinery Casings on Superstructure Decks ...								
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...								
Deckhouses on Flush Deck Ships ...								

Fiddly S. Room. Brackets.

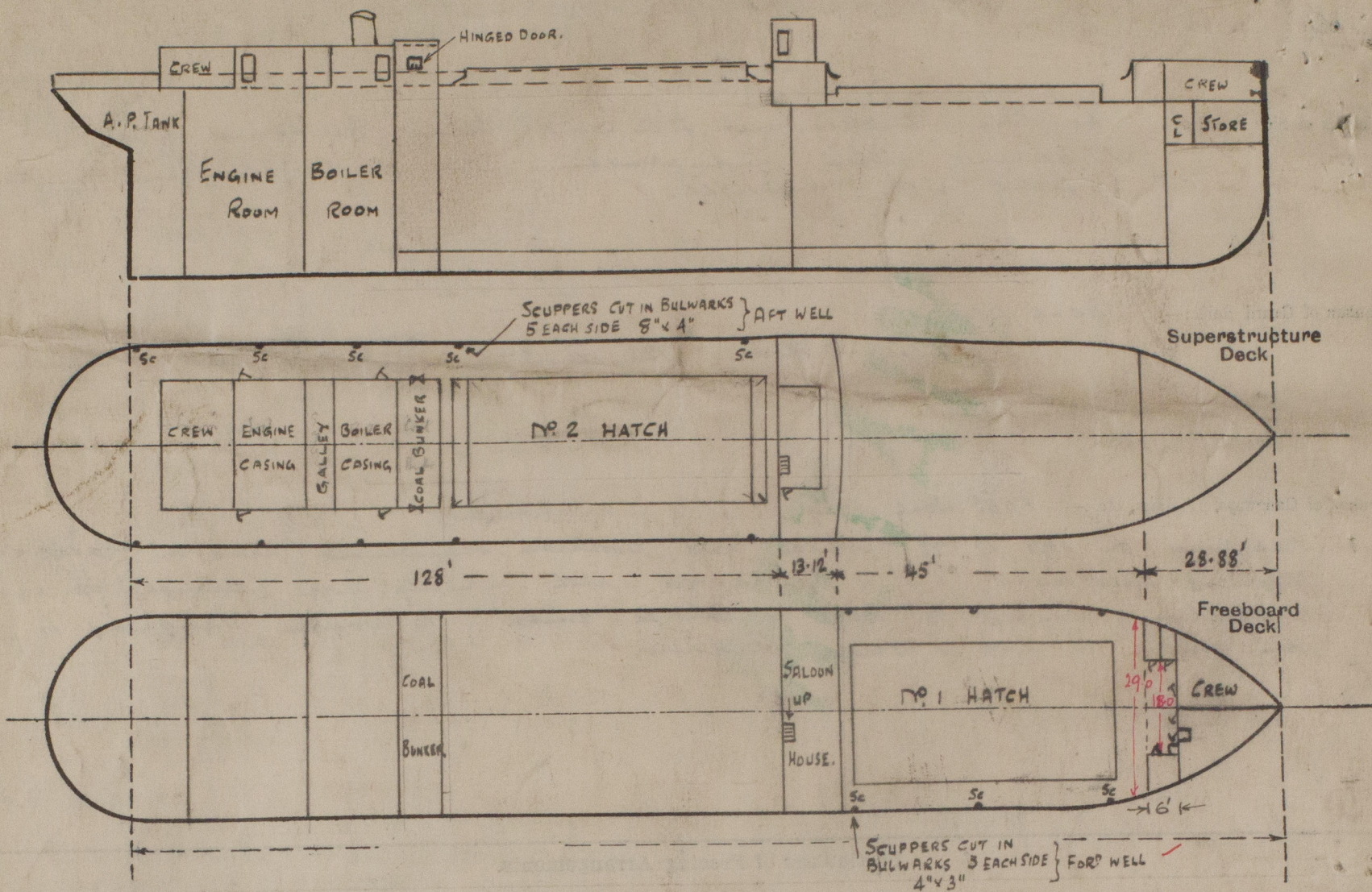
Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead ...	
Raised Quarter Deck Bulkhead ...	no openings.
Bridge, After Bulkhead ...	
Bridge, Forward Bulkhead ...	✓ no openings
Forecastle Bulkhead ...	wood doors to accommodation operated from both sides ✓ Steel doors to side houses & store below operated from both sides ✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	Steel doors to Fiddly & Engine Room operated from both sides ✓
Exposed Machinery Casings on Superstructure Decks ...	Steel doors to Brackets operated from outside casing. ✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	
Deckhouses on Flush Deck Ships ...	





*Holme Force*

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:—



*Forecastle 22.88 28.88*  
*Sidehouses  $\frac{6.0 \times 11.0}{29.0} = 2.28$  25.16*  
*3.72 overlay*

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

Builder's name and yard number *Goole Shipbuilding & Repairing Co (1927) Ltd*

Names of sister ships

Owners *West Coast Shipping Co Ltd (W.S. Kennedy & Co. mngs.)*

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