

COMPUTATION OF FREEBOARD

Length on summer load line $107'-0"$ Moulded Breadth $26'-0"$ Moulded Depth $13'-6"$ Depth of Keel $7'$
 Moulded displacement (ex bossing) at moulded draught of 85 per cent. of moulded depth 512 Tons
 Co-efficient of fineness for use with tables $\frac{\Delta \times 35}{L \times B \times D \times .85} = .5614$ (USE .68 MIN.)
 Displacement and tons per inch immersion in salt water at summer load line 575 Tons 5.3 TON/INCH
 Moulded depth $13'-6"$ 13.5 Deduction for Fresh Water $\frac{\Delta}{40T} = 2.712$ inches
 Stringer Plate $.37"$ $.031$ Round of Beam Correction
 Sheathing on exposed deck T $(\frac{L-S}{L})$ - Ships Round of Beam $7"$ inches
 Rise of floor (in sailers) - Standard Round of Beam $\frac{B \times 12}{50} = 6.24$
 Depth for Freeboard (D) $11'-13\frac{1}{2}"$ 13.531 Difference $.76$
 Table Depth $L/15$ 7.133 Restricted to
 Depth Correction $L/130 \times$ 6.398 Correction $\frac{\text{Difference}}{4} \times (1 - \frac{E}{L}) = .19$ off
 If restricted by superstructures = 5.266

	Enclosed Length	Length of Overhang	Height	Mean Covered Length (S)	Height Correction	Effective Length (E)	
Poop							Standard Height of Superstructure
Raised Quarter Deck							" " R.Q.D.
Bridge		F					Percentage covered S/L =
		A					" " E/L =
Forecastle							" from Table line A, B, (corrected for absence of forecastle if required)
Trunk Aft							Percentage from Table by interpolation for Bridge
" Forward							less than .2L if required =
Tonnage Opening Aft							Deduction = NIL
" " Forward							Percentage from Table for Tankers (or Timber ships) =
Totals							Deduction =

measured from top of raised keel

Station	Actual Sheer	Standard Sheer	Effective Sheer	S.M.	Product
44 A.P.	17'-3"	20.7	44	1	44
24 1/2 L from A.P.	15'-6"	9.21	24	4	96
9 1/2 L from A.P.	14'-2"	2.28	9	2	18
- Amidships	13'-6"	-	-	4	-
4.5 1/2 L from F.P.	13'-9"	2.55	4.5	2	9
19 1/2 L " "	15'-11 1/2"	18.42	19	4	76
42 F.P.	17'-0"	41.4	42	1	42
				18	285

Mean Actual sheer aft = more than 1
 " Standard " "
 Mean Actual sheer forward = - - -
 " Standard " "
 Length of enclosed superstructure forward of amidships =
 Length of Ship
 Length of enclosed superstructure aft of amidships =
 Length of Ship
 Sheer Correction = Difference $\times (75 - \frac{S}{L}) = 5.483 \times .75 = 4.112$
 Effective Mean Sheer = 15.833
 Standard " " .05L + 5 = 10.350
 Difference = 5.483 to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft. = 1.6 off

TABULAR FREEBOARD corrected for flush deck if required = 12.30

		DRAUGHTS AND SEASONAL CORRECTIONS		Sailer, Tanker, Steamer	Timber
	+	-			
Depth correction	5.27				
Deduction for superstructures				Depth to Freeboard Deck in feet	13.531
Sheer correction		1.60		Summer Freeboard in feet	1.292
Round of Beam correction				Moulded Draught (d)	12.239
Correction for thickness of deck amidships		.19		Addition for Keel	.583
Other corrections, scantlings, etc.				Extreme draught ($12'-9\frac{7}{8}"$)	12.822
Summer Freeboard in Inches	5.27	1.79	3.48	Deduction for Tropical and addition for Winter freeboard $d/43.509$ ins.	
Additional allowance for superstructures on Timber carrying ships	($1'-3\frac{1}{2}"$)			Addition for Winter North Atlantic (if required)	5.509 ins.
Summer Timber Freeboard in inches				Deduction for Tropical Timber Freeboard $\frac{d}{3}$ ins.	
				Addition for Winter " " $\frac{d}{3}$ ins.	
				" " N.A. Timber Freeboard (if required)	

THE BRITISH CORPORATION REGISTER OF SHIPPING AND AIRCRAFT

SURVEY FOR FREEBOARD

CONDITIONS OF ASSIGNMENT

SHIPS NAME **Q.S. "EMPIRE BRACKEN" (TUG)** OFFICIAL NUMBER **168781**
 Nationality and Port of Registry **BRITISH. GDDLE.**

PARTICULARS OF SUPERSTRUCTURES, TRUNKS, CASINGS, DECKHOUSES

	Coaming	Plating	Stiffeners	Spacing	End Attachments	No. and size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	-	-	-	-	-	-	-	-
R.Q.D. "	-	-	-	-	-	-	-	-
Bridge Aft Bulkhead	.40"	.80"	3" x 3" x 3"	30"	-	-	-	-
" Forward "	-	.25"	3' x 2 1/2' x 25'	24"	-	-	-	7'-0"
Forecastle Bulkhead	-	-	-	-	-	-	-	-
Trunk, Aft	-	-	-	-	-	-	-	-
" Forward	-	-	-	-	-	-	-	-
Exposed Machinery Casings on Freeboard or R.Q. Decks	-	.25"	3" x 2 1/2" x 3"	30"	-	2-3'-0" x 2'-0"	24"	5'-6"
Exposed Machinery Casings on superstructure decks	-	-	-	-	-	-	-	-
Machinery Casings within Superstructures not fitted with Cl. 1 closing appliances	-	-	-	-	-	-	-	-
Deckhouses on flush deck ships	-	-	-	-	-	-	-	-

PARTICULARS OF CLOSING APPLIANCES (state if capable of being manipulated from both sides)

Poop Bulkhead	-
R.Q.D. "	-
Bridge Aft Bulkhead	-
" Forward "	-
Forecastle Bulkhead	-
Exposed Machinery Casings on Freeboard or R.Q. Decks	STEEL DOORS (HINGED) OPERATED BOTH SIDES.
Exposed Machinery Casings on superstructure decks	-
Machinery Casings within superstructures not fitted with Cl. 1 Closing Appliances	-
Deck houses on Flush Deck ships	-

PARTICULARS OF FREEING ARRANGEMENTS

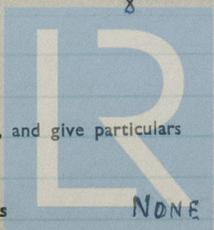
	Length of Bulwark	Height of Bulwark	No. and size of Freeing Ports each side	Area each side	Rule Area
After Well					
FORE PART	107'-0"	3'-0"	4 - 7'-0" x 6"	14 $\frac{1}{2}$	
Forward Well					

State fore and aft position and height above deck to bottom of port, for each port

}	After Well	FR.Nos 1- 39/43	FR.Nos. 1- 31/35	FR.Nos 1- 21/25	FR.NOS. 1- 12/16
	Forward Well		8"		

State whether freeing ports are fitted with shutters, bars or rails, and give particulars

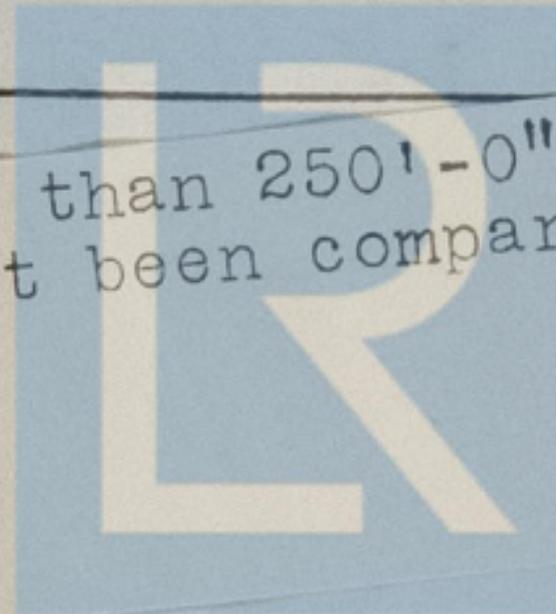
Give particulars of freeing port area, etc., on superstructure decks



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As this vessel is less than 250'-0" in length
the Freeboard Report has not been compared with the
approved plans.



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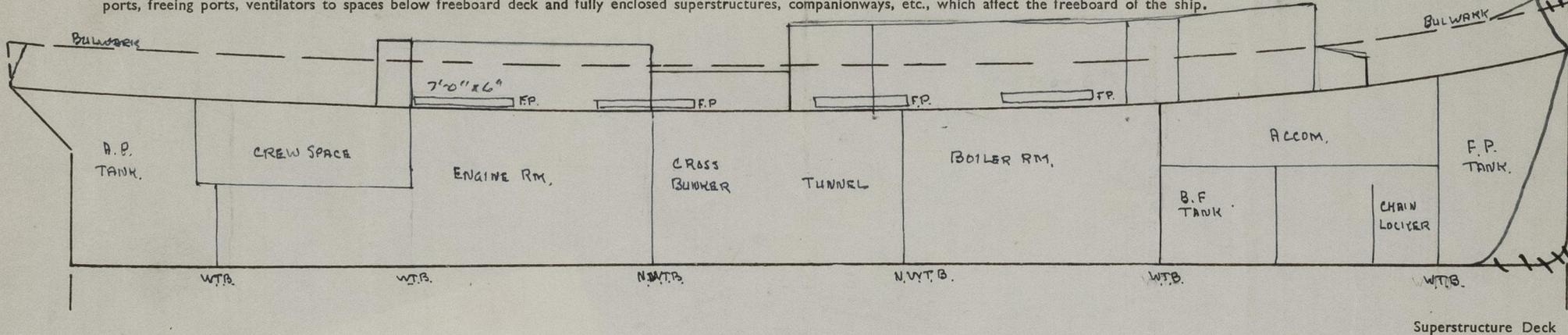
S.H.

2" COWL VENT
STOREHOLD.

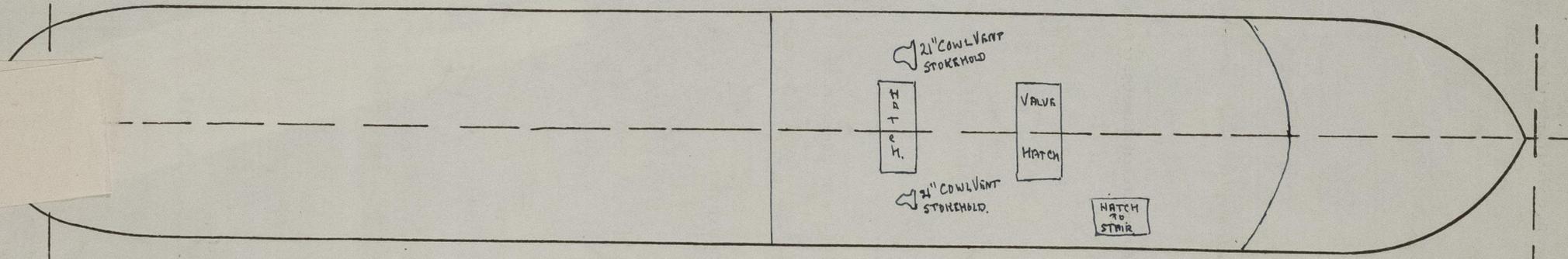
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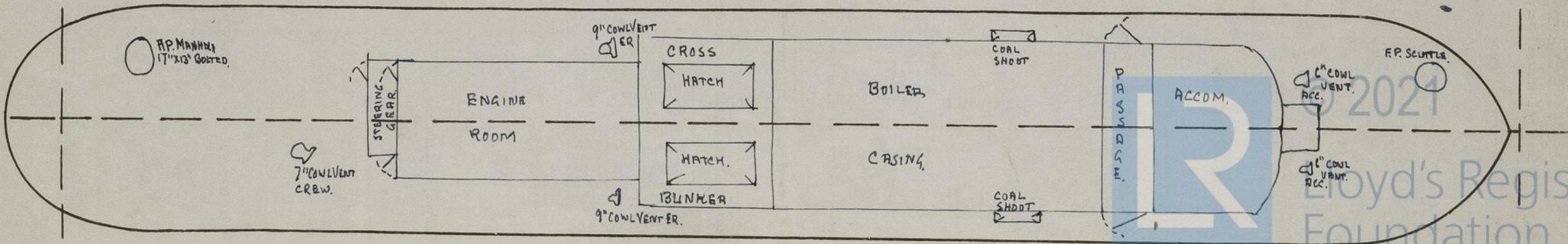
Position and dimensions of superstructure decks, position of superstructure bulkheads and openings, extent and thickness of wood sheathing in wells, position of cargo and coaling hatchways, gangway, cargo and coaling ports, freeing ports, ventilators to spaces below freeboard deck and fully enclosed superstructures, companionways, etc., which affect the freeboard of the ship.



Superstructure Deck



Freeboard Deck



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PARTICULARS OF ALL HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS

Number and description of Hatchway from forward		PORT & STAR.	PORT & STAR.							
Dimensions of Hatchway		SIDE BUNKERS	CROSS BUNKER.							
COAMINGS	Height } steel } deck	24"	3' 9"							
	above } wood }									
	Thickness { sides	.3"	.38"							
	ends									
	Stiffeners	—	3" X 2 1/2" X .25 26" SPACING.							
	Brackets or Stays	—	—							
HATCH BEAMS	Number	—	—							
	Spacing	—	—							
	Scantling and Sketch	—	—							
	Bearing Surface and thickness of carriers or sockets	—	—							
FORE AND AFTERS	Number	—	—							
	Spacing	—	—							
	Unsupported lengths	—	—							
	Scantling and Sketch	—	—							
	Bearing Surface and thickness of carriers or sockets	—	—							
HATCH COVERS	Material	W. PINE	W. PINE							
	Thickness	3"	3"							
	How Fitted	F. & A.	THWARTSHIPS							
	Bearing Surface	2 1/2"	2 1/2"							
	Spacing of Cleats	24"	24"							
	Number of Tarpaulins	2	2							



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Are tarpaulins in good condition and in accordance with rule requirements? YES
 Are lashings provided in accordance with rule requirements? YES

Are wood fore and afters steel shod at all bearing surfaces? —
 Are battens and wedges efficient and in good condition? YES.

Give full particulars of the following :—

Fiddley, Funnel and Vent Coamings, Engine Room skylight and other openings in Machinery Casing tops and their means of closing (state height of coamings, type of fiddley covers, and if these are permanently attached in their proper positions)

	<u>HEIGHT</u>	<u>OPENINGS</u>	<u>CLOSING ARRGS</u>
<u>FIDDLEY</u>	7'-0"	4'-6" x 1'-6"	HINGED STEEL COVERS WITH FASTENING.
<u>ER CASING</u>	5'-6"	6'-6" x 3'-3" 5'-9" x 5'-0"	BOLTED PLATE

Flush Bunker Scuttles on freeboard and superstructure decks (state material, type of joints, etc., and if secured by hinge or permanent chain attachment)

NONE

Companionways on freeboard and superstructure decks (state material, height of doorway sills, type of doors, and if these can be closed and secured from both sides)

	<u>MATERIAL</u>	<u>HEIGHT OF SILL</u>	<u>OPERATED</u>
UPPER DECK	STEEL	2'-4"	LOCKS BOTH SIDES.
"	STEEL	9"	BUTTERFLY NUTS. SCUTTLE TO F.P. TANK
"	"	9"	BOLTED MANHOLE TO A.P. TANK.
BRIDGE	TEAK	4"	LOCKS BOTH SIDES TO PASSAGE.

Ventilators in exposed positions on freeboard, raised quarter and superstructure decks to spaces below freeboard decks and fully enclosed superstructures enclosed by Class 1 appliances (state height of steel coamings, pitch of rivets in deck connection, type of closing arrangements)

	<u>COAMING HEIGHT</u>	<u>PITCH OF RIVETS</u>	<u>TYPE OF CLOSING</u>
<u>BRIDGE DECK</u> 2- STOREHOLD	3'-9"	3"	-
<u>UPPER DECK</u> 2-6" ACCUM FORD	3'-1"	3"	WOOD PLUGS & CANVAS COVERS
2-9" ER.	3'-0"	3"	" " " "
1-7" CREW AFT.	3'-1"	3"	" " " "

Airpipes in exposed positions on freeboard, raised quarter and superstructure decks (state height to opening and if satisfactory closing arrangements are provided)

	<u>HEIGHT</u>	<u>CLOSING ARRGS.</u>
<u>UPPER DECK</u> FORE PEAK	2'-6"	WOOD PLUGS
AFT PEAK	2'-6"	" "



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Scuppers and Sanitary Discharge Pipes (state material, type and number of valves)

PORT	MATERIAL	TYPE	N ^o OF VALVES
	GUNMETAL	CLACK VALVE	1 - 1 1/2" STORM VALVE FROM BASIN & GALLEY SCUPPER
	"	"	1 - 1 1/4" " " " "
STAR.	GUNMETAL	"	2 - 4" SOIL PIPES CONTROLLED FROM DK. 1 - 1 1/2" STORM VALVE FROM BASIN.

Side Scuttles to spaces below freeboard and superstructure decks (state type or pattern, and if permanent or portable deadlights are supplied)

ACCOMMODATION (UPPER DK)	TYPE	DEADLIGHTS	
		YES	HINGED
10" BRASS HINGED			
ER. CASING	10" " "	"	"

NONE ON SHELL PLATING BELOW UPPER DECK

Vertical distance of sill of lowest side scuttle below top of freeboard deck at side amidships

NONE

Guard Rails on freeboard and superstructure decks (state type and where fitted)

UPPER DECK BULWARKS.
BRIDGE DECK AFT STANCHIONS & TWO RAILS.

Gangways and Lifelines

GANGWAYS NONE
STORM RAILS ROUND CASINGS.

Gangway, Cargo and Coaling Ports in sides of ship

NONE.



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SUPPLEMENTARY REQUIREMENTS FOR STEAMER CARRYING TIMBER DECK CARGOES

Do Superstructure and Machinery Casings comply with rules? —

Is provision made for protection of steering gear? —

Is emergency steering gear provided? —

Are efficient sockets and eyes for lashings provided and properly spaced? —

State particulars of longitudinal subdivision in double bottom —

State particulars of Bulwarks and Rails —

Particulars of any Special Features in the construction of the Ship —

Endorsement at first survey and at surveys for Renewal of Certificate:—

The fittings and appliances are in accordance with the particulars shown in the form and are in good condition —



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