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Form LL. 4.C. Revised

THE BRITISH CORPORATION REGISTER OF
SHIPPING AND AIRCRAFT

SURVEY FOR FREEBOARD

23 OCT 1944

~~MOTORSHIP~~ ^{"FLEXITY"}
~~STEAMER TANKER, SAHER:~~ ^{EMPIRE FACILITY}

Nationality BRITISH Builders' Name and No. of Ship MESSRS. RICHARD OUNSTON LTD.
Port of Registry HULL HESSLE, E. YOKES. NO. 453.
Official Number 180308 Owners MINISTRY OF WAR TRANSPORT
Gross Tonnage 411.05 (MANAGERS) GENERAL STEAM NAVIGATION CO. LTD.
Date of Build 10/44 Port and Date of survey HULL (DURING CONSTRUCTION)
Particulars of Classification B. 3 + (COASTING SERVICE) Name of Surveyor W. J. Noble
Names of Sister Ships "FABRIC" TYPE.

Type of Superstructures POOP AND FORECASTLE

Trade of Ship

Service Endorsement if any

SUMMER FREEBOARD recommended amidships from centre of disc to top of deck line, (.....wood.....steel)

TROPICAL FRESH WATER LINE above centre of disc	<u>2 1/2"</u>	Corresponding Freeboard	<u>1'-6"</u>
FRESH WATER LINE " " "	<u>2 1/2"</u>	" "	<u>1'-3 1/2"</u>
TROPICAL LINE " " "	<u>0</u>	" "	<u>1'-3 1/2"</u>
WINTER LINE below " "	<u>2 1/2"</u>	" "	<u>1'-6"</u>
WINTER NORTH ATLANTIC LINE " " "	<u>4 1/2"</u>	" "	<u>1'-8 1/2"</u>
		" "	<u>1'-10 1/2"</u>

SUMMER TIMBER FREEBOARD recommended amidships from top of deck line

TROPICAL FRESH WATER Timber line above L.S.

FRESH WATER " " " "		Corresponding Freeboard	
TROPICAL " " " "		" "	
WINTER " " below "		" "	
WINTER NORTH ATLANTIC " " " "		" "	

Number of years recommended for load line certificate

The scantlings and protective arrangements being in accordance with the Load Line Rules it is submitted that the freeboards be assigned

Chief Surveyor

Passed at a meeting of the Committee of Management of the British Corporation Register of Shipping and Aircraft

on the 1st NOVEMBER, 1944

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Lloyd's Register
Foundation
[Secretary]

002659-002666 - 0034 1/2

COMPUTATION OF FREEBOARD

(REVISED SECTION)

Length on summer load line 141'0" Moulded Breadth 27'0" Moulded Depth 11'0" Depth of Keel 1"
 Moulded displacement (ex bossing) at moulded draught of 85 per cent. of moulded depth 775 Tons 9'4 3/16"
 Co-efficient of fineness for use with tables $\frac{\Delta \times 35}{L \times B \times D \times .85} = .713$
 Displacement and tons per inch immersion in salt water at summer load line 742 @ 7.95 T.P.I.
 Moulded depth 11.000 Deduction for Fresh Water $\frac{\Delta}{40T} = 2\frac{1}{2}"$ inches
 Stringer Plate 3/8" .031 Round of Beam Correction
 Sheathing on exposed deck T $\left(\frac{L-S}{L}\right)$. Ships Round of Beam 0.00 inches
 Rise of floor (in sailers) - Standard Round of Beam $\frac{B \times 12}{50} = 6.48$
 Depth for Freeboard (D) 11.031 Difference 6.48
 Table Depth 4.15 9.400 Restricted to
 Depth Correction 4.130 1.631 Correction $\frac{\text{Difference}}{4} \times \left(1 - \frac{S}{L}\right) = 1.62 \times .2262$
 If restricted by superstructures 1.769 dm 3.3665 dm

	Enclosed Length	Length of Overhang	Height	Mean Covered Length (S)	Height Correction	Effective Length (E)
Poop	37'6 3/4"		7'0"	41.26	-	41.26
Raised Quarter Deck						
Bridge		F				
		A				
Forecastle	13'8 1/2"	1'10"	8'0"	15.63	-	14.83
Trunk Aft	35'1"		7'0"	18.27	18/27	23.39
" Forward	27'10"		3'4"	27.6	27/6	8.26
Tonnage Opening Aft	18'10"		3'4"	14.71	2.67	4.56
" Forward						
Totals	2.67 on Account of Low Hatch Coamings.	23.39	18.56	56.89		92.30

Standard Height of Superstructure 6'0"
 " " R.Q.D. .
 Percentage covered S/L = 40.34 %
 " " E/L = 65.46 %
 " from Table line A, B, (corrected for absence of forecastle if required) 55.28 %
 Percentage from Table by interpolation for Bridge less than .2L if required = -
 Deduction = 20.1 x 55.28 = 11.11 OFF
 Percentage from Table for Tankers (or Timber ships) = -
 Deduction = -

Station	Actual Sheer	Standard Sheer	Effective Sheer	S.M.	Product	Mean Actual sheer aft
A.P.	0	24.1	-	1	-	= less than 1
1/2 L from A.P.	0	10.72	-	4	-	Mean Actual sheer forward = less than 1
1/2 L from A.P.	0	2.61	-	2	-	" Standard " "
Amidships	0	-	-	4	-	Length of enclosed superstructure forward of amidships =
1/2 L from F.P.	0	5.22	-	2	-	Length of Ship
1/2 L " "	0	21.44	-	4	-	Length of enclosed superstructure aft of amidships =
F.P.	0	48.20	-	1	-	Length of Ship
			18			Sheer Correction = Difference X (.75 - $\frac{S}{2L}$) = <u>12.05 x 54.83</u>
Effective Mean Sheer						= <u>6.607 dm</u>
Standard " " .05L + 5						If limited on account of midship superstructure =
Difference						" to maximum allowance of 1 1/2 ins. per 100 ft. =

TABULAR FREEBOARD corrected for flush deck if required = 14.33Correction for co-efficient = 1393/136 = 14.68 DRAUGHTS AND SEASONAL CORRECTIONS

	+	-		Sailer, Tanker, Steamer	Timber
Depth correction	1.77	-			
Deduction for superstructures	-	11.11			
Sheer correction	6.61		Depth to Freeboard Deck in feet	11.031	
Round of Beam correction	.37		Summer Freeboard in feet	1.500	
Correction for thickness of deck amidships			Moulded Draught (d)	9.531	(d1)
Other corrections, scantlings, etc.	5.68		Addition for Keel 1"	.083	
	14.43	11.11	Extreme draught	9.614.	
Summer Freeboard in Inches	1'6	=	Deduction for Tropical and addition for Winter freeboard d/4 = $2\frac{1}{2}"$ ins.		
Additional allowance for superstructures on Timber carrying ships		=	Addition for Winter North Atlantic (if required)	- 4 1/2" ins.	
Summer Timber Freeboard in Inches		=	Deduction for Tropical Timber Freeboard $\frac{d1}{d}$	= - ins.	
		=	Addition for Winter " " $\frac{d1}{3}$	= - ins.	
		=	" " N.A. Timber Freeboard (if required)	= - ins.	

X Draught in S.W. Restricted

Form LL. 4.D.

THE BRITISH CORPORATION REGISTER OF SHIPPING AND AIRCRAFT

SURVEY FOR FREEBOARD

CONDITIONS OF ASSIGNMENT

SHIPS NAME "EMPIRE FACILITY" OFFICIAL NUMBER 180308
 Nationality and Port of Registry BRITISH 4066

23 OCT 1944

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		5/16"	5' 5/16"	2' 3"	WELDED	2 @ 10" dia.	5' 1"	7' 0"
R.Q.D. "								
Bridge Aft Bulkhead								
" Forward "								
Forecastle Bulkhead		5/16"	3' 3 1/4"	2' 0" 2' 6"	WELDED	2 @ 4' 1" x 1' 10"	1' 3"	8' 0"
Trunk, Aft		5/16"	3 3/4" 5/16"	1' 10"	"			7' 0"
" Forward		5/16"	4" 5/16"	1' 8"	"			3' 4"
Exposed Machinery Casings on Freeboard or R.Q. Decks								
Exposed Machinery Casings on superstructure decks	5/16"	1/4"	4' 5/16"	1' 9"	WELDED AT TOP BUT AT BOTTOM			8' 3" 8' 5"
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	STEEL DOORS OPERATED BOTH SIDES.
Exposed Machinery Casings on Freeboard or R.Q. decks	
Exposed Machinery Casings on superstructure decks	
Machinery Casings within superstructures not fitted with Cl. 1 Closing Appliances	
Deck houses on Flush Deck ships	

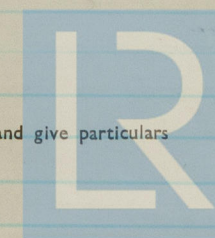
PARTICULARS OF FREEING ARRANGEMENTS

	Length of Bulwark	Height of Bulwark	No. and size of Freeing Ports each side	Area each side	Rule Area
After Well					
Forward Well		SEE SKETCH.			

State fore and aft position and height above deck to bottom of port, for each port
 } After Well
 } Forward Well

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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20x14 MANHOLE
BOLTED

MOTOR ROOM CASING

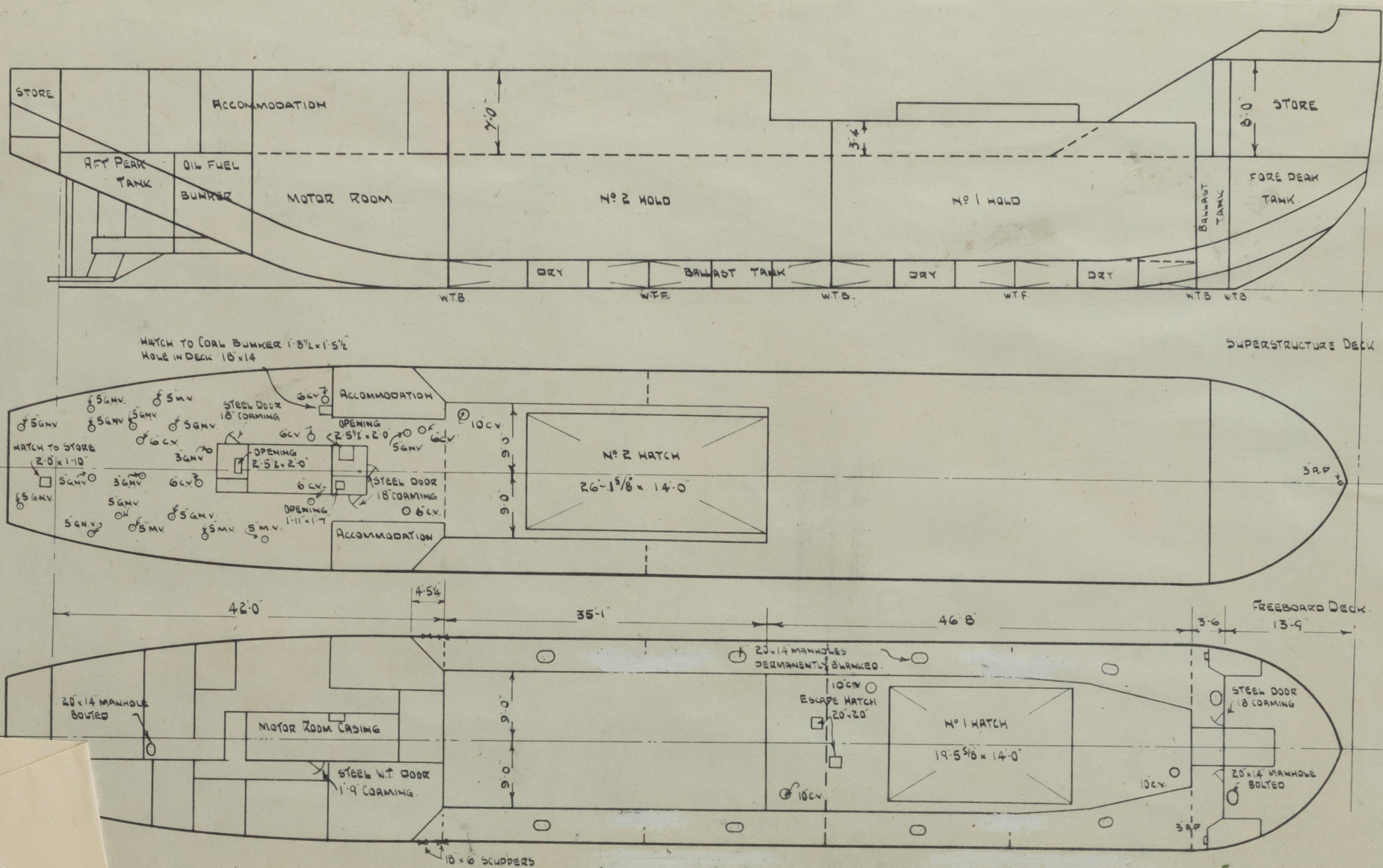
ESCAPE HATCH
20x20"

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

002659-002666-0034 2 1/2

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1 JUN 1950



PARTICULARS OF ALL HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS

Number and description of Hatchway from forward	UPPER DECK		POOP DECK	
	No. 1 HATCH	No. 2 HATCH	HATCH TO GALLEY BUNKER	HATCH TO AFTER STORE
Dimensions of Hatchway	19'-11 5/8" x 14'-8 3/4"	26'-7 5/8" x 14'-8 3/4"	1'-8 1/2" x 1'-5 1/2"	2'-0" x 1'-10"
COAMINGS	Height above steel deck 4'-2" ABOVE OK	Height above steel deck 4'-10" ABOVE OK	Height above steel deck 1'-4 1/2"	Height above steel deck 1'-6"
	10" COAMING	10" COAMING	10" COAMING	10" COAMING
Thickness	1/2"	1/2"	1/2"	1/2"
Stiffeners	2	3	3	3
Brackets or Stays	6'-8"	6'-8"	6'-8"	6'-8"
HATCH BEAMS	Number	2	3	3
	Spacing	6'-8"	6'-8"	6'-8"
Scantling and Sketch	3" x 3/8" PLAT 10" x 6" 40 LBS. SOLIST	3" x 3/8" PLAT 10" x 6" 40 LBS. SOLIST	3" x 3/8" PLAT 10" x 6" 40 LBS. SOLIST	3" x 3/8" PLAT 10" x 6" 40 LBS. SOLIST
Bearing Surface and thickness of carriers or sockets	3"	3"	3"	3"
FORE AND AFTERS	Number	2	3	3
	Spacing	6'-8"	6'-8"	6'-8"
Unsupported lengths	6'-8"	6'-8"	6'-8"	6'-8"
Scantling and Sketch	3" x 3/8" PLAT 10" x 6" 40 LBS. SOLIST	3" x 3/8" PLAT 10" x 6" 40 LBS. SOLIST	3" x 3/8" PLAT 10" x 6" 40 LBS. SOLIST	3" x 3/8" PLAT 10" x 6" 40 LBS. SOLIST
Bearing Surface and thickness of carriers or sockets	3"	3"	3"	3"
HATCH COVERS	Material	WOOD	STEEL	WOOD
	Thickness	2 7/8"	5/16"	2 5/8"
How Fitted	F.E.A.	F.E.A.	F.E.A.	F.E.A.
Bearing Surface	3"	1" PACKING	3"	3"
Spacing of Cleats	24"	2 DOGS.	24"	2 EACH SIDE
Number of Tarpaulins	2	2	2	2

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?

NONE

FITTED

Are battens and wedges efficient and in good condition?

YES



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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)

1 CONCRETE VENT P.C.S. 10" DIA. 2'-0" CORNING WELDED TO CASING TOP 8'-5" ABOVE DECK
1 G.Y. - - - A - 1'-6" ABOVE CASING - - - - -
4 HINGED STEEL SKYLIGHT FLAPS 2'-3" 2'-0" NO BULLEYES ON CASING TOP 7'-6" ABOVE DECK
1-5" M.V. FITTED ON TOP OF EACH SKYLIGHT FLAP - 6" CORNING

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

ЧОНЕ

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)

ENTRANCE TO ACCOMMODATION	ON	LEAVING FRONT	STEEL	DOOR	OPERATED	BOTH	SIDES	18" COMPING
-	-	PART SIDE	-	-	-	-	-	-
-	-	STAIRDO	-	-	-	-	-	-

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)

UPPER DECK.										
3.10"	OW.	CONK	VENTS	P 5	33"	CORNING	WELDED	TO	TRUNK TOP	WOOD PLUGS C. CANVAS COVERS
POOD DECK.										
4.6"	DIA.	CONK	VENTS	P.	3'6"	CORNING	WELDED	TO	DECK	WOOD PLUGS C. CANVAS COVERS
3.6"	-	-	-	S	-	-	-	-	-	-
5.5"	9.4	VENTS		P	18"	ABOVE	OK.	BOLTED	-	-
2.5"	M.			P	6'	-	-	-	-	RUBBER JOINT SCREW TOP
5.5"	9.4	VENTS		S	18"	-	-	-	-	WOOD PLUGS C. CANVAS COVERS
2.5"	M.			P	6'	-	-	-	-	RUBBER JOINT SCREW TOP
1.3"	9.4	VENT		P	33"	-	-	WELDED	-	WOOD PLUG C. CANVAS COVER
1.5"	DIA.	CONK	VENT	S	30'	CORNING	-	-	-	-

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

1-3"	4	AIRPIPE	OK	2'-0"	ABOVE	RAILCASTLE	BOLTED	TO	DECK	WOOD	PLUG	S-	CANNAS	COVER
3-3"	-	-	DE 5	3'-10"	-	UPPER	OK	-	-	-	-	-	-	-
1-3"	-	-	DE 5	7'-3"	-	-	-	-	-	-	-	-	-	-
2'-3"	-	-	-	1'-7 1/2"	-	TRUNK TOP	A 11 1/2"	ABOVE	UPPER	OK, WELDED	TO	TRUNK TOP	WOOD	PLUGS & CANNAS COVER

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

BELOW LAREBOARD DECK.

PORT 1. 3" G.M. SCREW DOWN	STRAIGHT THRU	TYPE	DISCHARGE	VALVE WITH EXTENDED	SPINDLE TO UPPER	OK
STARBOARD 2. 3" G.M.	-	-	-	VALVES	-	-

990VE FREEBOARD DECK

PORT	1- 3" G.M. SCREW DOWN	STRAIGHT	THRO	TYPE	DISCHARGE	VALVE
STARBOARD	3.4"	-	-	-	-	VALVES

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

NONA

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

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

3" 2 1/2" .30" ANGLE STANCHIONS WITH THREE SOLID RAILS ON POOL & UPPER DECKS AND ON GEL END OF FORECASTLE DECK UPPER RAIL 1" DIA. LOWER RAILS 3/8" DIA. RAILS SPACED 13" APART

Gangways and Lifelines

COLLAPSIBLE STANCHIONS WITH $1\frac{1}{2}^{\circ}$ G.F.S.W.P AROUND CARGO HATCHES
 $1\frac{1}{2}^{\circ}$ G.F.S.W.P BILGE LINE FROM FORE END OF ROOF STARGO DECKHOUSE TO AFT END OF MIDSHIP
 GUN PEDESTAL AND FROM FORE END OF MIDSHIP GUN PEDESTAL TO FORECASTLE BOW.

Gangway, Cargo and Coaling Ports in sides of ship

NONE

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