

In accordance with authorization by the Minister of Transport  
the expiry date on this provisional Load Line Certificate is extended  
until September 15th, 1949.

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# BRITISH CORPORATION REGISTER OF SHIPPING AND AIRCRAFT

## SURVEY FOR FREEBOARD

STEAMER, ~~TA~~ "SCOTIADOC" EX. "MARTIN MULLEN" WITHOUT TIMBER DECK CARGO  
 Nationality BRITISH. Builders' Name and No. of Ship AMERICAN S. B. COY.,  
 Port of Registry FORT WILLIAM, ONTARIO. CLEVELAND, OHIO. N-422.  
 Official Number 173186. Owners PATERSON STEAMSHIPS LTD.  
 Gross Tonnage 4431.54.  
 Date of Build 1904. Port and Date of survey TORONTO, ONT. NOV: 1947.  
 Name of Surveyor THOMAS L. MILLAR.  
 Particulars of Classification Names of Sister Ships -  
 Type of Superstructures FORECASTLE ONLY.  
 Trade of Ship BULK CARRIER.

Service Endorsement if any (GREAT LAKES & RIVER ST. LAWRENCE SERVICE)   
 This ship, being over 250' long, can navigate the upper end of the St. Lawrence River only so far down as Prescott. Consider "Service" should be shown as "Great Lakes Service" - same as other upper lakers.

LINE	REMARKS	DIAMOND	WOOD	STEEL	FREEBOARD
SUMMER FREEBOARD	recommended amidships from centre of disc to top of deck line, (.....wood.....steel)		84"		8'-1"
TROPICAL FRESH WATER LINE	above centre of disc	-			-
FRESH WATER LINE	" " "	-			-
TROPICAL LINE INTERMEDIATE BELOW	" " " DIAMOND	5"			8'-6"
WINTER LINE	below " "	11 1/2"			9'-0 1/2"
WINTER NORTH ATLANTIC LINE	" " "	-			-

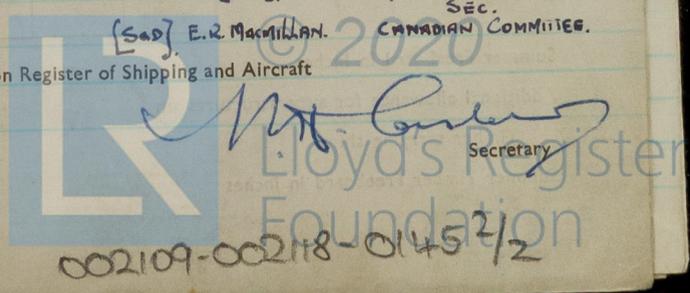
LINE	REMARKS	FREEBOARD
SUMMER TIMBER FREEBOARD	recommended amidships from top of deck line	
TROPICAL FRESH WATER Timber line	above L.S.	
FRESH WATER	" " " "	
TROPICAL	" " " "	
WINTER	" " below "	
WINTER NORTH ATLANTIC	" " " "	

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

RESOLVED AT A MEETING OF CANADIAN COMMITTEE ON THE 7<sup>TH</sup> OCTOBER, 1948.  
 REPORTED PASSED at a meeting of the Committee of Management of the British Corporation Register of Shipping and Aircraft on the 18<sup>TH</sup> DECEMBER 1948

[INTO] E.R.M. to Chief Surveyor  
 [Sd] E.R. Macmillan. Sec. CANADIAN COMMITTEE.  
 Secretary



Refer A.B. Computation attached.

### COMPUTATION OF FREEBOARD

Length on summer load line **423' 8"** Moulded Breadth **50'** Moulded Depth **28' 0 7/8"** Depth of Keel **13 1/4'**  
 Moulded displacement (ex bossing) at moulded draught of 85 per cent. of moulded depth Tons  
 Co-efficient of fineness for use with tables  $\frac{\Delta \times 35}{L \times B \times D \times .85} = 84.1$

Displacement and tons per inch immersion in salt water at summer load line

Moulded depth	28.07	Deduction for Fresh Water	$\frac{\Delta}{40T} =$	inches
Stringer Plate	.07	Round of Beam Correction		
Sheathing on exposed deck T $(\frac{L-S}{L})$	-	Ships Round of Beam	12	inches
Rise of floor (in sailers)	-	Standard Round of Beam $\frac{B \times 12}{50}$	12	
Depth for Freeboard (D)	28.141	Difference	<u>0</u>	
Table Depth $\frac{L}{15}$	28.24	Restricted to		
Depth Correction	3 x .10	Correction $\frac{\text{Difference}}{4} \times (1 - \frac{E}{L}) =$		
If restricted by superstructures	= .30 off			

	Enclosed Length	Length of Overhang	Height	Mean Covered Length (S)	Height Correction	Effective Length (E)	
Poop							Standard Height of Superstructure 7'-0"
Raised Quarter Deck							" " R.Q.D. -
Bridge		F					Percentage covered S/L = 10.9%
		A					" " E/L = 6%
Forecastle	46'	NIL.	4'-2"	46.0	$\frac{4.17}{7.5}$	25.6	" from Table line A, B, (corrected for absence of forecastle if required) 3%
Trunk Aft							Percentage from Table by interpolation for Bridge less than .2L if required = -
" Forward							Deduction = $42 \times .03 = 1.26$
Tonnage Opening Aft							Percentage from Table for Tankers (or Timber ships) =
" " Forward							Deduction =
Totals				46.0		25.6	

Station	Actual Sheer	Standard Sheer	Effective Sheer	S.M.	Product	
A.P.	31.13			1	31.13	Mean Actual sheer aft = less than 1
1/2 L from A.P.	8.00			4	32.00	" Standard " "
1/2 L from A.P.	0			2	0	Mean Actual sheer forward = less than 1
Amidships	0			4	0	" Standard " "
1/2 L from F.P.	6.75			2	13.50	Length of enclosed superstructure forward of amidships =
1/2 L " "	24.13			4	96.52	Length of Ship
F.P.	59.13			1	59.13	Length of enclosed superstructure aft of amidships =
				18	232.28	Length of Ship
Effective Mean Sheer					12.90	Sheer Correction = Difference $\times (75 - \frac{S}{2L}) = 13.28 \times 69.55$
Standard " " .05L + 5					26.18	= 9.23 on
Difference					13.28	If limited on account of midship superstructure = -
						" to maximum allowance of 1 1/2 ins. per 100 ft. = -

TABULAR FREEBOARD corrected for flush deck if required = 73.5

Correction for co-efficient =  $\frac{15.24}{136} = 82.36$  DRAUGHTS AND SEASONAL CORRECTIONS

	+	-		Sailer, Tanker, Steamer	Timber
Depth correction	-	.30			
Deduction for superstructures	-	1.26		Depth to Freeboard Deck in feet 28.14	
Sheer correction	9.23	-		Summer Freeboard in feet 8.08	
Round of Beam correction	-	-		Moulded Draught (d) 20.06	20'-0 3/4" (d1)
Correction for thickness of deck amidships	-	-		Addition for Keel .15	
Other corrections, scantlings, etc.	7.00	-		Extreme draught 20.21	20'-2 1/2"
HATCHES & AFTER DECKHOUSE	16.23	1.86	+ 14.67	Deduction for Tropical and addition for Winter freeboard $d/4 = 5''$	ins.
Summer Freeboard in Inches	8'-1"		= 97.03	Addition for Winter North Atlantic (if required) $d/2.57 = 11 1/2''$	ins.
Additional allowance for superstructures on Timber carrying ships $I + 5 = 8'-6''$				Deduction for Tropical Freeboard $\frac{d}{4} =$	ins.
Summer Timber Freeboard in inches $W + 11 1/2 = 9'-0 1/2$				Addition for Winter " " $\frac{d}{3} =$	ins.
				" " N.A. Timber Freeboard (if required) =	ins.

# THE BRITISH CORPORATION REGISTER OF SHIPPING AND AIRCRAFT

## SURVEY FOR FREEBOARD CONDITIONS OF ASSIGNMENT

SHIPS NAME "SCOTIADOC" OFFICIAL NUMBER  

Nationality and Port of Registry **BRITISH. FORT WILLIAM, ONTARIO.**

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									
" Forward "									
✓ Forecastle Bulkhead		30"	30"	3" x 3" x 3/8"	30"	NIL.	1-6 1/8" x 25" 1-6 1" x 25 1/2"	12"	4'-2"
Trunk, Aft									
" Forward									
Exposed Machinery Casings on	} SIDES	3/16"	3/16"	⊖	⊖	⊖	3 at 60" x 27" 1 " 66" x 24 3/4"	18"	} 7'-6"
Freeboard or R.Q. Deck									
Exposed Machinery Casings on superstructure decks	} NONE.								
Machinery Casings within Superstructures not fitted with Cl. 1 closing appliances	} NONE.								
Deckhouses on flush deck ships									N.A.

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

Poop Bulkhead	NONE.
R.Q.D. "	"
Bridge Aft Bulkhead	"
" Forward "	"
Forecastle Bulkhead	HINGED STEEL DOORS (TWO) - BOTH SIDES.
Exposed Machinery Casings on Freeboard or R.Q. deck	HINGED STEEL DOORS - BOTH SIDES.
Exposed Machinery Casings on superstructure decks	NONE.
Machinery Casings within superstructures not fitted with Cl. 1 Closing Appliances	NONE.
Deck houses on Flush Deck ships	N.A.

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	}	NO WELLS.			
Forward Well					

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

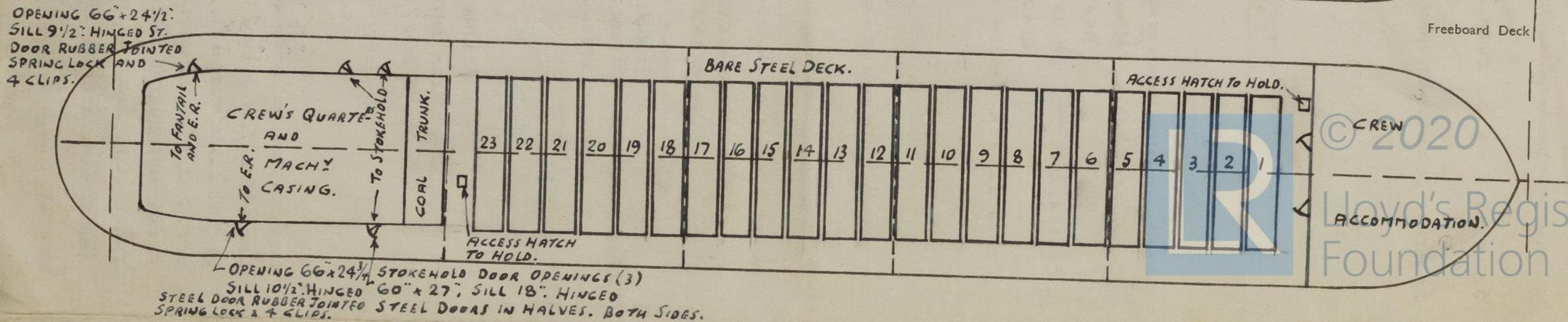
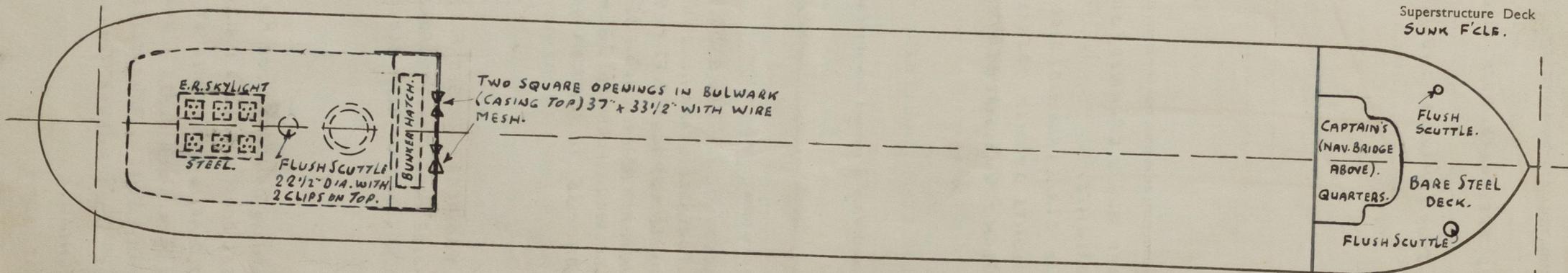
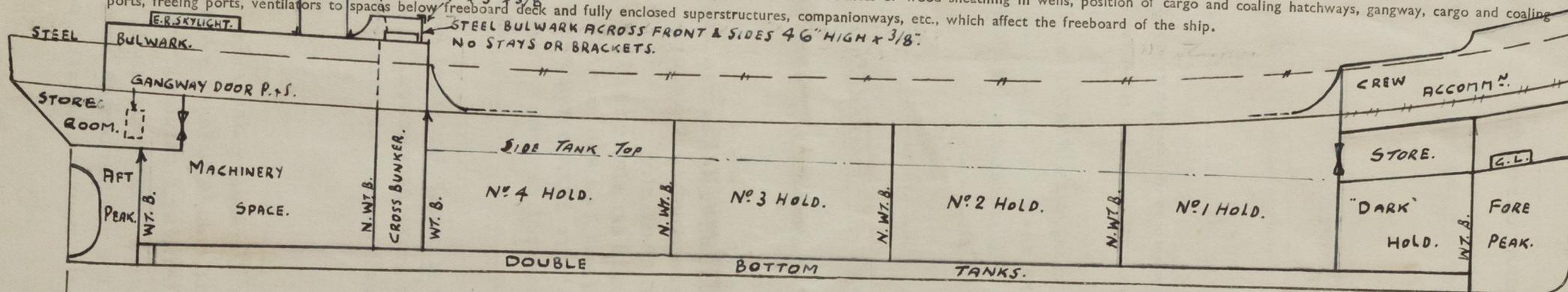
Give particulars of freeing port area, etc., on superstructure decks



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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.



PARTICULARS OF ALL HATCHWAYS ON FREEBOARD

forwarded to

Number and description of Hatchway from forward	23 CARGO HOLD HATCHWAYS.	ACCESS HATCH To FORE END N-1 HOLD.	ACCESS HATCH To AFT END N-4 HOLD.
Dimensions of Hatchway	9' x 36'	2 F.T. x 2 F.T.	2 F.T. x 2 F.T.
COAMINGS	Height above steel deck	21" AT CA.	6" O.A.
	Thickness sides ends	7/16" / 7/16"	3/8"
	Stiffeners	3" x 3" x 3/8" → 2	-
	Brackets or Stays	NONE.	-
HATCH BEAMS	Number	NONE.	NONE.
	Spacing	-	-
	Scantling and Sketch	-	-
Bearing Surface and thickness of carriers or sockets	-	-	-
STEEL COVERS FLANGED FORE AND AFTERS	Number	NONE.	NONE.
	Spacing	-	-
	Unsupported lengths	9 F.T.	-
	Scantling and Sketch	2 - 1 3/16" DIA. PINS (CHAINED 8" RIVETED) AT CENTRAL. 8" FL → 8" FL	-
Bearing Surface and thickness of carriers or sockets	-	-	-
HATCH COVERS	Material	STEEL.	STEEL.
	Thickness	1/4"	3/8"
	How Fitted	HINGED.	HINGED.
Bearing Surface	13/16"	3/8"	3/8"
Spacing of Clips	33 1/2" - 44 1/2" → 9" FROM CORNERS. 45" → 9" " "	5 CLIPS.	5 CLIPS.
Number of Tarpaulins	1 PER HATCH.	RUBBER JOINT.	RUBBER JOINT.

Are tarpaulins in good condition and in accordance with rule requirements? **YES.**

Are lashings provided in accordance with rule requirements? **PER HATCH - 4 - 4" x 1 1/2" x 1 1/2" L BARS.**

Are wood fore and afters steel shod at all bearing surfaces? **NONE.**

Are battens and wedges efficient and in good condition? **YES. WOOD BATTENS. STEEL WEDGES ON CLIPS.**



Give full particulars of the following :—

Fiddle, 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 fiddle covers, and if these are permanently attached in their proper positions)

E. R. SKYLIGHT... 8' x 13' 10"... FLAP OPENINGS 18" ABOVE CASING TOP... SIX 3' x 3' 6" FLAP OPENINGS CLOSED BY HINGED STEEL FLAPS WITH 3 - 1 1/4" DIA. GLASS LIGHTS IN EACH.  
CASING TOP BUNKER HATCHWAY... CLOSED BY HINGED STEEL COVERS WITH 2 1/2" x 2 1/2" x 5/16" O.A. STIFFENERS ON UNDERSIDE, SPACED 43" AND 19" FROM ENDS.

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

FORECASTLE DECK - FLUSH SCUTTLE P. & S. WITH CLIPS FOR SECURING LID ABOVE DECK, AND SCREW ON UNDERSIDE COVER FOR SECURING BAR.  
FREEBOARD DECK - FLUSH SCUTTLE AFT TO FAN-TAIL WITH TWO SECURING CLIPS ON TOP SIDE.

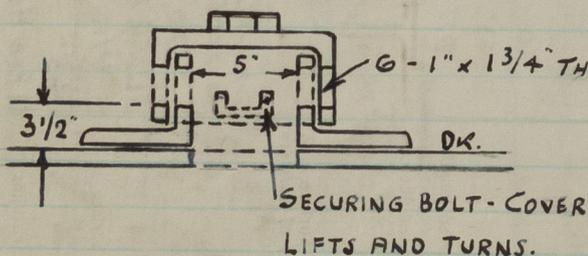
Companionways on freeboard and superstructure decks (state material, height of doorway sills, type of doors, and if these can be closed and secured from both sides)

NONE.

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)

NONE.

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



SKETCH OF AIR VENTS ON FREEBOARD DECK AT SIDES - LED DOWN THROUGH SIDE TANKS.

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

SCUPPERS P. & S. ON EXPOSED FREEBOARD DECK DISCHARGING OVERBOARD.

SANITARY DISCHARGES HAVE STORM VALVE AT SHELL.

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

MACHINERY SPACE - HINGED GLASS (FRAMED) SIDE SCUTTLES WITH HINGED DEADLIGHTS.

FORECASTLE - HINGED GLASS (FRAMED) SIDE SCUTTLES, WITH PORTABLE PLATE DEADLIGHTS STOWED ADJACENT TO EACH.

CHAIN LOCKER 'TWEEN DECK - ONE SIDE SCUTTLE P. & S. WITH HINGED DEADLIGHT.

Vertical distance of sill of lowest side scuttle below top of freeboard deck at side amidships 7'-1" - E.R. SCUTTLE.

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

FREEBOARD DECK - ABREAST CARGO HATCHES - TWO S.W.R. TOP WIRE 34'1/2" AND BOTTOM 20'1/2" ABOVE DECK. PORTABLE STANCHIONS IN SOCKETS RIVETED THROUGH GUNWALE ANGLE - SPACED 8 FT TO 9 FEET APART.

STEEL BULWARK AFT ABREAST HOUSE 35" FOR<sup>d</sup> TO 38" AFT WITH F<sup>l</sup> BK<sup>ts</sup> & TOP STIFFENS

FORECASTLE DECK - STEEL BULWARK FORWARD 36" HIGH, AND TWO RAIL STANCHIONS TO AFTER END - 35" TO TOP RAIL AND 18'1/2" TO BOTTOM RAIL ABOVE DK.

Gangways and Lifelines

LIFELINE PROVIDED - RIGGED F. & A. ON  $\frac{1}{2}$ " ABOVE FREEBOARD DECK FROM AFT SIDE FORE MAST TO FORE END AFTER DECKHOUSE.

1/2" DIAR. S.W.R. SET UP WITH BLOCKS AND TACKLE, AND WITH ROPE TAILS.

Gangway, Cargo and Coaling Ports in sides of ship GANGWAY DOOR P. & S. TO MACHINERY SPACE FAN TAIL COMPARTMENT. HINGED STEEL DOOR WITH 12'1/2" DIA. SCUTTLE HINGED INBOARD AND SECURED BY TWO CLIPS, AND HINGED DEADLIGHT SECURED BY 2 CLIPS. SHELL OPENINGS 4'-10" HIGH X 3 FT. SILL 9" ABOVE LOWER DECK. DOOR PLATE 1" THICK... IN HALVES... FOUR HINGES ON FORW<sup>d</sup> SIDE RIVETED THROUGH SHELL. FOUR CLIPS AT TOP AND BOTTOM OF DOOR, AND THREE CLIPS ON EACH SIDE. DOOR RUBBER JOINTED. NO DOUBLER LOCALLY ON SHELL AROUND DOOR OPENING.

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

SIDE TANKS IN WAY OF CARGO HOLDS, AND PLATE ARCHES BETWEEN CARGO HATCHES.

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

*Thos. L. Lillis.*

*Toronto, Ont.*



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