

## WRECK SECTION

30806

11 JUL 1932

## Lloyd's Register of Shipping.

Index No. (For London Office only.)

## SURVEYS FOR FREEBOARD.

GLASGOW REPORT No. 52715

No. 584

Computation of Freeboard for Motor Ship

having a shelter deck with tonnage opening and fore-castle on shelter deck

Port of Survey Glasgow

Date of Survey 8th July 1932

Name of Surveyor H. McQueen

Ship's Name PACIFIC SHIPPER

Nationality and Port of Official Number  
Registry British London 114593Gross Tonnage 6290  
6304 1924-3Moulded Dimensions: Length 420.0 Breadth 54.49 Depth 30.96  
Moulded displacement at moulded draught = 85 per cent. of moulded depth 12717 tons  
Coefficient of fineness for use with Tables 753Particulars of Classification + 100 A.1.  
with freeboard  
S.S. No. 1101-28Depth for Freeboard (D)  
Moulded depth ... 30.96  
Stringer plate ... 40 .03  
Sheathing on exposed deck  
 $T \left( \frac{L-S}{L} \right) =$   
Depth for Freeboard (D) = 30.95Depth correction  
(a) Where D is greater than Table depth  
(D - Table depth) R =  $(30.95 - 28.00)3$   
= + 8.85  
(b) Where D is less than Table depth (if allowed)  
(Table depth - D) R =  
If restricted by superstructuresRound of Beam correction  
Moulded Breadth (B) 54.49  
Standard Round of Beam =  $\frac{B \times 12}{50} = 13.87$   
Ship's Round of Beam = 14  
Difference Excess .13  
Restricted to  
Correction =  $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.13}{4} \left( 1 - \frac{.006}{.9940} \right)$ 

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed	23.33	23.33	8'6"		23.33
" overhang	.33	.17			.17
R.Q.D. enclosed					
" overhang					
Bridge enclosed	391.25	391.25	8'6"		391.25
" overhang aft	.34	.25			.25
" overhang forward					
F'cle enclosed	25.5	4.6			
" overhang					
Trunk aft					
" forward					
Tonnage opening aft	4.75	2.50	8'6"		2.50
" forward					
Total	420.00	417.50			417.50

Standard Height of Superstructure 7.50  
" " R.Q.D.  
Deduction for complete superstructure 42.00  
Percentage covered  $\frac{S}{L} = 100$   
"  $\frac{S_1}{L} = 99.40$   
"  $\frac{E}{L} = 99.40$   
Percentage from Table, Line A.  
(corrected for absence of fore-castle (if required))  
Percentage from Table, Line B. 99.26  
(corrected for absence of fore-castle (if required))  
Interpolation for bridge less than .2L (if required)  
Deduction =  $42.00 \times .9926 = 41.69$ 

## SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	52.00	1	52.00	54.4	57.25	1	69.25
1/2 L from A.P.	23.14	4	92.56	20	20.93	4	123.28
3/4 L	5.72	2	11.44	4.5	5.23	2	15.24
Amidships		4		0		4	
3/4 L from F.P.	11.44	2	22.88	12.5	13.04	2	24.04
1/2 L	46.28	4	185.12	52	52.14	4	235.00
F.P.	104.00	1	104.00	120	120.0	1	132.00
Total			468.00				603.81

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{.75 - S}{2L} \right) = \frac{468.00}{18} \left( \frac{.75 - .50}{2L} \right) = \frac{135.81}{18} \left( \frac{.25}{2L} \right) = -1.29$   
If limited on account of midship superstructure.Mean actual sheer aft = Excess  
Mean standard sheer aft  
Mean actual sheer forward = Excess  
Mean standard sheer forward  
Length of enclosed superstructure forward of amidships = } C.S.S.  
" " aft of " = }  
If limited to maximum allowance of 1 1/2 ins. per 100 ft.Deduction for Tropical Freeboard.  
Addition for Winter and Winter North Atlantic Freeboard.Depth to Freeboard Deck = 30.95  
Summer freeboard = 3.94  
Moulded draught (d) = 27.01Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches = 6.75  
Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 142.09$   
Tons per inch immersion at summer load water lineT = 46.98  
Deduction =  $\frac{\Delta}{40 T}$  inches = 7.86

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient  $\frac{753 + .68}{1.36} = \frac{1.432}{1.36}$ 

	+	-
Depth Correction	8.85	
Deduction for superstructures		41.69
Sheer correction		1.89
Round of Beam correction		
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		
	8.85	43.58

Summer Freeboard = 47.25

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

Tropical Fresh Water Line above Centre of Disc	14.4
Fresh Water Line	7 1/2
Tropical Line	6 3/4
Winter Line below	6 3/4
Winter North Atlantic Line	

Tropical Fresh Water Freeboard	2 - 9"
Fresh Water	3 - 3 1/2"
Tropical	3 - 4 1/2"
Winter	4 - 6"
Winter North Atlantic	

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## PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS																					
		SUPERSTRUCTURE DECK					FREEBOARD DECK														
Description of Hatchway		Nº1	Nº2	Nº3	Nº4	Nº5-Nº6	Nº1	Nº2	Nº3	Nº4	Nº5	ESCAPE HATCHES	ESCAPE HATCH AT NO. 2 DECK	DEEP TANK NO. 3	DEEP TANK NO. 4	HATCH TO FORE PEAKS	HATCH ON F'SOLE	HATCH TO STORE ROOMS	TONGUES	TO AT PEAKS	
Dimensions of Hatchway		24'-0"	24'-0"	24'-1"	27'-1"	24'-4 1/2" x 22'-0"	24'-0"	29'-9 1/2"	16'-3"	16'-3"	24'-4 1/2"	2'-6"	2'-0"	10'-6"	9'-10"	4'-1"	4'-0"	4'-6"	4'-9"	1'-9"	
COAMINGS	Height above Deck	28"	2'-8"	2'-8"	2'-8"	2'-8"	18"	18"	18"	18"	18"	9"	3"	9"	AS	9"	2'-4"	2'-9"	12"	3"	
	Thickness	48"	54"	54"	48"	44"	60"	60"	44"	44"	60"	B.A.	ANGLE	CMG.	CMG.	B.A.	35"	40"	B.A.	ANGLE	
	Stiffeners	7 B.A.	7 B.A.	7 B.A.	7 B.A.	7 B.A.	NONE	NONE	NONE	NONE	NONE	CMG.	CMG.	CMG.	3	CMG.	35"	40"	CMG.	CMG.	
	Brackets, Stays	2 ST.	2	2	2	2	NONE	NONE	NONE	NONE	NONE						NONE	NONE	NONE		
HATCH BEAMS	Number	5	5	5	5	4	5	5	3	3	4										
	Spacing	4'-6"	4'-11 1/2"	4'-6"	4'-6"	4'-10 1/2"	4'-6"	4'-11 1/2"	4'-1"	4'-1"	4'-10 1/2"										
	Scantling and Sketch	19 x 36 4 x 3 1/4	19 x 36 4 x 3 1/4	19 x 36 4 x 3 1/4	19 x 36 4 x 3 1/4	4 x 10 1/2 SAME AS Nº3	19 x 36 4 x 3 1/4	19 x 15 4 x 3 1/4	30 x 36 4 x 3 1/4	19 x 36 4 x 3 1/4	19 x 36 4 x 3 1/4										
	Bearing Surface	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"										
FORE AND AFTERS	Number																				
	Spacing																				
	Unsupported Lengths																				
	Scantling* and Sketch																				
HATCH COVERS	Material	W.P.					W.P.					W.P.	PLUG INSULATED	PLATE COVER	AS	W.P.	W.P.	W.P.	W.P.	W.P.	
	Thickness	2 7/8"					2 3/4"					3"	INSULATED	HATCH	NO.	2 7/8"	2 3/4"	2 7/8"	2 7/8"	2 1/2"	
	How fitted	F+A					F+A					F+A	TO LOWER	BOLTS	3	F+A	F+A	TRANS	F+A	F+A	
	Bearing Surface	3 1/2"					3"					HINGED	TWEEN DECKS	4 PART		1 1/4"	1 3/4"	1 3/4"	1"	3"	
Spacing of Cleats		2'-0"					2'-0"					2'-0"	NONE	JOINTED		2'-0"	2'-6"	2'-0"	TEMP. MEANS		
Number of Tarpaulins		2					2					1	NONE	WT.		1	2	2	OF CLOSING	NONE	
<div>*Are wood fore and afters steel shod at all bearing surfaces? NONE</div> <div>Are battens and wedges efficient and in good condition? yes</div> <div>Are tarpaulins in good condition and in accordance with rule requirements? yes</div> <div>Are lashings provided in accordance with rule requirements? Ringbolts are fitted for lashings</div> <div>Escape Hatch aft end of No. 2 Hatch on shelter deck. 2'-0" x 2'-4", cmg 2'-10" x 30" hky, 2 3/4" wood covers bearing 1 3/4" cleats 2'-0" apart. 2 tarpaulins</div>																					

Particulars of fiddley, funnel and ventilator coamings :—

openings on casing top protected by strong hinged plate covers  
Motor Room skylights on casing top made of steel strongly constructed  
Tunnel & ventilators on casing top in good condition

Particulars of Flush Bunker Scuttles:—

NONE

Particulars of Companionways:—

panionways :- Entrance to crew quarters aft through steel house strongly constructed. Hinged steel doors 4'-9" x 1'-11", sill 18" operated from both sides. Entrance to tunnel escape in crew quarters aft thro' steel tank. Hinged steel door 5'-0" x 1'-9" sill 1'-3" operated both sides

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

all ventilators constructed in accordance with the rules & closed with wood plugs & canvas covers -

Particulars of Ventilators in exposed positions on foreboard and superstructure decks :-			Wooden pumps & canvas covers		
1 Vent to fore peak store on Puckle Lk	36" high x 12" dia x 27" shk.	1 Vents to cooler Room midships 11'-0" high x 12" dia x 35" stayed to Bridge	2 Vents to hold after Lk	2'-6" x 20" dia x 32"	2 D.P.V. suitably stayed
2 " " " "	36" x 20" x 36"		2 " " " "	2'-9" x 18" x 32"	
3 " " " "	36" x 18" x 36"	2 " " " "	33" x 20" x 33"	4 " " " "	2'-6" x 18" x 33"
6 " " " on fore shelter Lk	36" x 16" x 30"	4 " " " " Deep tanks 30" x 12" dia x 40" II with 1'-3" x 14" cmg on top	2 " " " "	2'-6" x 16" x 30"	2 D.P.V. suitably stayed
4 " " " " Hold	36" x 18" x 33"	2 D.P.V. suitably stayed	2 " " " "	2'-6" x 10" x 27"	1 Vent to tunnel escape after Lk
2 " " " " + tweens	36" x 20" x 33"	2 Vents to Boiler Room midships 4'-3" high x 30" dia x 32"	4 " " " "	2'-6" x 12" x 26"	1 " " " " after peak store 2'-6" x 6" x 20"
2 " " " " " " "	36" x 18" x 32"	2 " " " " Engine Room 8'-6" x 20" x 40"			
2 " " " " " " "	30" x 18" x 32"	1 S.N. Vent to store Rm midships 12" high x 6" dia			

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

1 air pipe to fore peak tank on fscle sk 14" high x 2 1/2" dia. } 2 air pipes to D.B. tanks on Shelter sk aft 20" x 4" dia. x  
 x 2 " " " D.B. tank " " " 21" x 3" } 2 air " " aft, peak " " " 14" x 2 1/2"  
 x 2 " " " " " " " 21" x 3" }  
 x 16 " " " " " " " 22" x 4" }  
 2 " " " " " " " 18" x 2 1/2" }  
 1 " " " " " " " 32" x 2" }

air pipes marked x fitted with Gyros. valves  
 other pipes closed with wood plugs  
 no snifting holes fitted. ~~no means of~~  
~~closing air pipes.~~

Particulars of Gangway Cargo and Coaling Ports :—

NONE

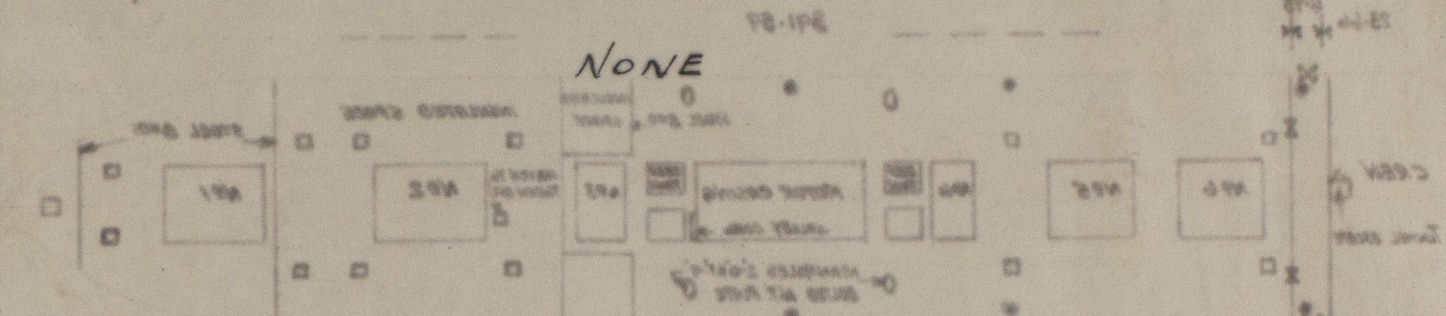


Particulars of Scuppers and Sanitary Discharge Pipes:— Scuppers from nos 1+2 tween decks led to bilges. Scuppers from after tween decks led below freeboard deck fitted with storm valves at ships side, 3'-6" below deck, nothing at inner end. Scupper from tonnage well led below freeboard deck, fitted with storm valve at ships side, 2'-6" below deck, nothing at inner end. Overflow from fore peak tank discharges below freeboard deck fitted with storm valve at ships side. Sanitary discharges midships + aft led below freeboard deck fitted with storm valves at ships side.

Particulars of Side Scuttles:— There are no side scuttles below freeboard deck. Side scuttles in crew quarters + stores aft fitted with hinged deadlights.

Particulars of Guard Rails:— See Sketch. Guard rails on forecastle deck 3'-4" high with 3 rods, stanchions 3'-6" apart. There is a steel bulwark 3'-4" high with 2 freeing ports 2'-6" x 1'-6", 12" above deck with 2 rods, bulwark efficiently supported. Guard rails on forward + after deck 3'-4" high with 3 rods, stanchions 5'-0" apart.

Particulars of Gangways, Lifelines, etc.:—



Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
Tonnage Well	8'-4 1/2"	8'-6"	2'-6" x 1'-6"	1	3.45 sq ft	
After Well	4'-4 1/2"					
Forward Well						
State position of each freeing port (F. and A. position and height above deck edge) After Well:— Between tonnage bulkheads, 9" above deck Forward Well:—						
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Hinged plate shutter						
Additional area where sheer is less than standard.						

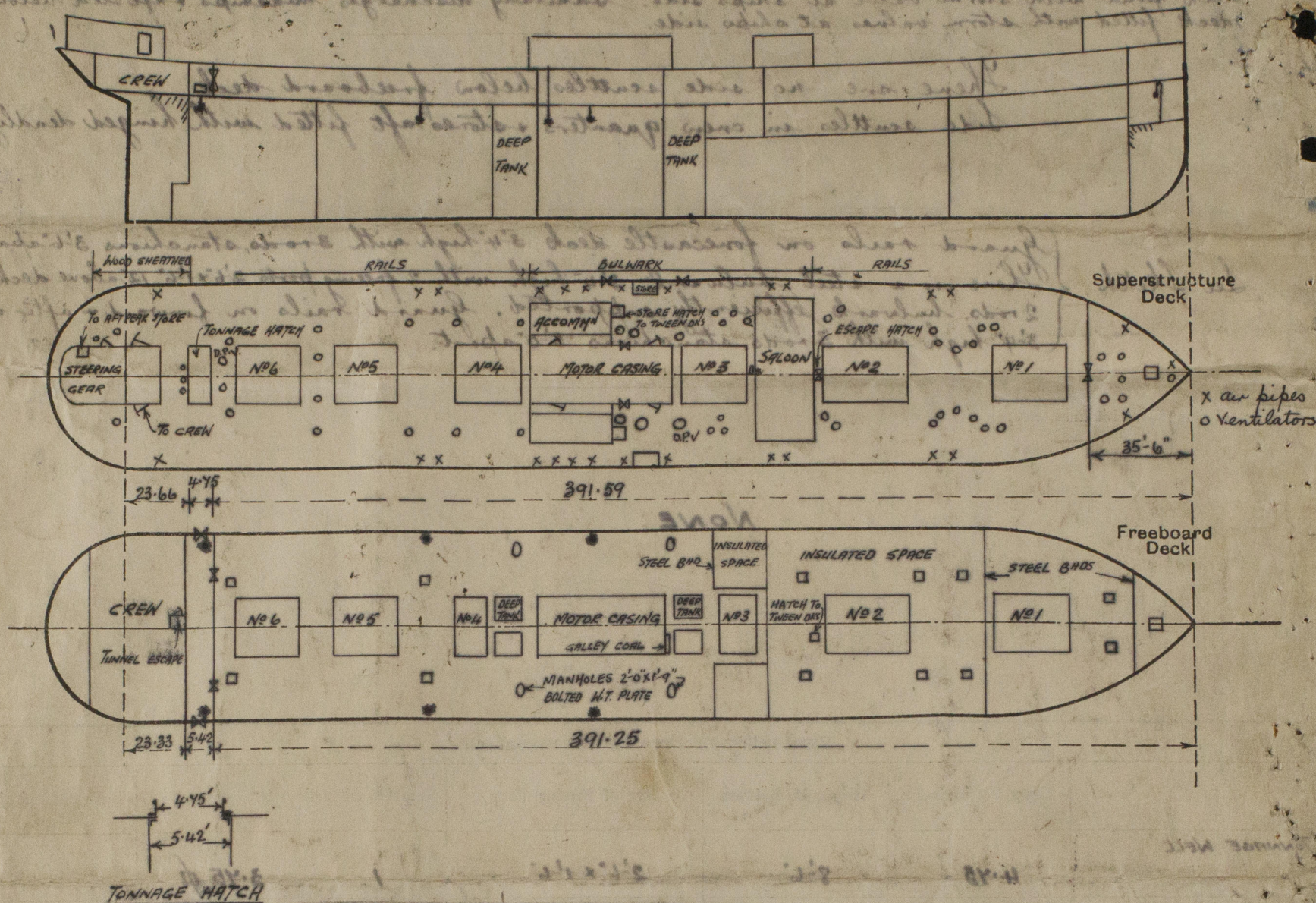
Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	✓	.28"	3 1/2" x 3" x 30"	2'-2"	NONE	NONE	NONE	8'-6"
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead	✓	.28"	3 1/2" x 3" x 30"	2'-3"	NONE	6'-0" x 3'-0"	18"	8'-6"
Bridge, Forward Bulkhead								
Forecastle Bulkhead	18" x 36"	.30"	3" x 3" x 34"	2'-6"	NONE	4'-11" x 4'-6"	18"	4'-6"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks								
Exposed Machinery Casings on Superstructure Decks	16" x 40"	.30"	3" x 3" x 36"	2'-4"	Brackets at top	3'-0" x 1'-8" 4'-4" x 1'-10"	2'-9" 18"	4'-6"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	26" x 44"	.44"	3 1/2" x 3" x 32"	2'-9"	Riveted to beam at top	NONE	NONE	8'-6"
Deckhouses on Flush Deck Ships								

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	NONE
Raised Quarter Deck Bulkhead	
Bridge, After Bulkhead	2 5/8" shifting boards full height in angle riveted to stiffener
Bridge, Forward Bulkhead	
Forecastle Bulkhead	2 7/8" shifting boards full height in channels riveted to bulkhead
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	
Exposed Machinery Casings on Superstructure Decks	Hinged steel doors operated both sides. (Small opening) Hinged steel doors operated one side
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	NONE
Deckhouses on Flush Deck Ships	



# Pacific Grader

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 shown on the following sketches:—



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

Keel 12'  
 $85\frac{1}{2}\% \text{ net } D = 26'-28" = 26'-3\frac{1}{2}" = 26'-5" \text{ BK}$   
 $\text{But } A @ 26'-8\frac{1}{2}" \text{ BK} = 13939 \quad \text{TR.1} = 46.95$   
 $\text{Net } A @ 26'-5" = 13939 - (3.25 \times 46.95) = 13786 = 13717 \text{ BK.}$   
 $\text{Summer net det } 27.02 = 27'-2" \text{ BK}$   
 $\text{Net } A @ 26'-8\frac{1}{2}" \text{ BK} = 13939$   
 $\text{Net } A @ 27'-2" = 14209$   
 $5\frac{1}{2} \times 46.95 = 270$

Vessel engaged in general Trade  
 Timber freeboard not required

This survey was held afloat and confined to an examination of the means for closing the openings in the decks & sides of the ship

OK IT.

Builder's name and yard number

W. Doxford & Sons Ltd.

Yard no 544

Names of sister ships

Pacific Grader

Owners

Furness Withy & Co. Ltd.

Fee £

14 : 9 : 0

Received by me

*[Signature]*



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