

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

21 APR 1932

W 123

 Computation of Freeboard for Steamer, ~~Sailing Ship, Tug~~
 having Poop, Bridge and Forecastle.
Port of Survey Newcastle.Date of Survey 25th, 26th April 1932.Name of Surveyor C. StephensonParticulars of Classification + 100 A.1.

Ship's Name FIR PARK
 Nationality and Port of Registry British Latinian
 Official Number 43755 Gross Tonnage 1955 Date of Build 1920-6
 Moulded Dimensions: Length 279.75' Breadth 41.66' Depth 20'-9 1/2"
 Moulded displacement at moulded draught = 85 per cent. of moulded depth not available 4490 tons
 Coefficient of fineness for use with Tables .763 ✓

Depth for Freeboard (D)
 Moulded depth 20.79
 Stringer plate04
 Sheathing on exposed deck
 $T \left(\frac{L-S}{L} \right) =$
 Depth for Freeboard (D) = 20.83 ✓

Depth correction
 (a) Where D is greater than Table depth
 (D - Table depth) R =
 $(20.83 - 18.65) \times 2.152 = +4.69$ ✓
 (b) Where D is less than Table depth (if allowed)
 (Table depth - D) R =
 If restricted by superstructures

Round of Beam correction
 Moulded Breadth (B) 41.66
 Standard Round of Beam = $\frac{B \times 12}{50} = 10"$
 Ship's Round of Beam = 14 1/2"
 Difference 4.50
 Restricted to
 Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{4.5}{4} \left(1 - \frac{42.43}{279.75} \right) = -0.64$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>21.25'</u>	<u>21.25</u>	<u>7'-0"</u>	✓	<u>21.25</u>
" overhang ... <u>S.H.</u>	<u>2-5-73</u>	<u>.73</u>			<u>.73</u>
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...	<u>67.5'</u>	<u>67.50</u>	<u>7'-0"</u>	✓	<u>67.50</u>
" overhang aft ...					
" overhang forward					
F'cle enclosed ...	<u>29.2'</u>	<u>29.20</u>	<u>7'-0"</u>	✓	<u>29.20</u>
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward					
Total ...	<u>118.68</u>	<u>118.68</u>			<u>118.68</u>

Standard Height of Superstructure 6.30
 " " R.Q.D. ✓
 Deduction for complete superstructure 33.97
 Percentage covered $\frac{S}{L} = 42.43$
 " " $\frac{S_1}{L} = 42.43$
 " " $\frac{E}{L} = 42.43$
 Percentage from Table, Line A.
 (corrected for absence of forecastle (if required))
 Percentage from Table, Line B. 29.56
 (corrected for absence of forecastle (if required))
 Interpolation for bridge less than 2L (if required) .24 ✓
 Deduction = $33.97 \times .2956 = -10.04$ ✓

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>37.97</u>	1		<u>37.97</u>	<u>50.50</u>	<u>50.50</u>	1		<u>50.50</u>
1/4 L from A.P. ...	<u>16.90</u>	4		<u>67.60</u>	<u>22.12</u>	<u>22.12</u>	4		<u>88.48</u>
1/2 L " ...	<u>4.18</u>	2		<u>8.36</u>	<u>5.53</u>	<u>5.53</u>	2		<u>11.06</u>
Amidships ...	-	4		-	-	-	4		-
3/4 L from F.P. ...	<u>8.35</u>	2		<u>16.70</u>	<u>9.48</u>	<u>9.48</u>	2		<u>18.96</u>
1/4 L " ...	<u>33.79</u>	4		<u>135.16</u>	<u>37.92</u>	<u>37.92</u>	4		<u>151.68</u>
F.P. ...	<u>75.94</u>	1		<u>75.94</u>	<u>86.50</u>	<u>86.50</u>	1		<u>86.50</u>
Total ...				<u>341.73</u>					<u>407.18</u>

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 = .11 ✓

" " aft of " = .13 ✓

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{65.45}{18} \left(\frac{.75 - .2121}{.5379} \right) = -1.96$ ✓

If limited on account of midship superstructure. ✓

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.

Ft.
 Depth to Freeboard Deck = 20.83
 Summer freeboard = 2.75
 Moulded draught (d) = 18.08

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 4.52 - 4 1/2"

Addition for Winter North Atlantic Freeboard (if required = 2.0

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 4694 @ 18'-3"$

Tons per inch immersion at summer load water line

$T = 23.11$

Deduction = $\frac{\Delta}{40T}$ inches

= 5.08 - 5"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.763 + .68}{1.36} = \frac{1.443}{1.36}$

	+	-
Depth Correction ...	<u>4.69</u>	-
Deduction for superstructures ...	-	<u>10.04</u>
Sheer correction ...	-	<u>1.96</u>
Round of Beam correction ...	-	<u>.64</u>
Correction for Thickness of Deck amidships ...	-	-
Other corrections, scantlings, etc. ...	-	-
	<u>4.69</u>	<u>12.64</u>

Summer Freeboard = 33.05

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

Tropical Fresh Water Line above Centre of Disc ... 9 1/2"
 Fresh Water Line " " ... 5"
 Tropical Line " " ... 4 1/2"
 Winter Line below " " ... 4 1/2"
 Winter North Atlantic Line " " ... 6 1/2"

Tropical Fresh Water Freeboard ... 2'-1 1/2" FREEBOARDS
 Fresh Water " " ... 2'-4" RE-ASSIGNED
 Tropical " " ... 2'-4 1/2" UNDER 1906
 Winter " " ... 3'-1 1/2" REGULATIONS.
 Winter North Atlantic " " ... 3'-3 1/2"

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

Description of Hatchway	HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS				BRIDGE CASINGS		POOP DECK		UPPER DECK	
	No. 1	No. 2	No. 3	No. 4	BUNKER HATCHES	COAL SHOOT HATCH	BUNKER HATCH	TO STORE	TO FORE PEAK	TO AFT PEAK
Dimensions of Hatchway	25' x 16'	25' x 16'	25' x 16'	25' x 16'	20' x 3'	12' x 7' 6"	20' x 3'	3' x 3'	2' 9" x 2' 8"	2' 9" x 2' 8"
COAMINGS	Height above Deck	36"	36"	36"	30"	38"	38"	10 1/2" above wood deck	9' 3" x 4' 2"	9' 3" x 4' 2"
	Thickness Sides	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"
	Thickness Ends	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"
	Stiffeners	7 x 3 x 42/48	7 x 3 x 42/48	7 x 3 x 42/48	7 x 3 x 42/48	7 x 3 x 42/48	7 x 3 x 42/48	7 x 3 x 42/48	7 x 3 x 42/48	7 x 3 x 42/48
HATCH BEAMS	Number	4	4	4	4	4	4	4	4	4
	Spacing	5' 0"	5' 0"	5' 0"	5' 0"	5' 0"	5' 0"	5' 0"	5' 0"	5' 0"
	Scantling and Sketch	14' x 3 1/2"	14' x 3 1/2"	14' x 3 1/2"	14' x 3 1/2"	14' x 3 1/2"	14' x 3 1/2"	14' x 3 1/2"	14' x 3 1/2"	14' x 3 1/2"
	Bearing Surface	2 1/4 x 7'	2 1/4 x 7'	2 1/4 x 7'	2 1/4 x 7'	2 1/4 x 7'	2 1/4 x 7'	2 1/4 x 7'	2 1/4 x 7'	2 1/4 x 7'
FORE AND AFTERS	Number	4	4	4	4	4	4	4	4	4
	Spacing	5' 0"	5' 0"	5' 0"	5' 0"	5' 0"	5' 0"	5' 0"	5' 0"	5' 0"
	Unsupported Lengths	14' x 3 1/2"	14' x 3 1/2"	14' x 3 1/2"	14' x 3 1/2"	14' x 3 1/2"	14' x 3 1/2"	14' x 3 1/2"	14' x 3 1/2"	14' x 3 1/2"
	Scantling and Sketch	14' x 3 1/2"	14' x 3 1/2"	14' x 3 1/2"	14' x 3 1/2"	14' x 3 1/2"	14' x 3 1/2"	14' x 3 1/2"	14' x 3 1/2"	14' x 3 1/2"
HATCH COVERS	Material	W.P.	W.P.	W.P.	W.P.	W.P.	W.P.	W.P.	W.P.	W.P.
	Thickness	3"	3"	3"	3"	3"	3"	3"	3"	3"
	How fitted	F.A.	F.A.	F.A.	F.A.	F.A.	F.A.	F.A.	F.A.	F.A.
	Bearing Surface	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"
Spacing of Cleats	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"
Number of Tarpaulins	3	3	3	3	3	3	3	3	3	3

*Are wood fore and afters steel shod at all bearing surfaces? *yes.*
 Are battens and wedges efficient and in good condition? *yes.*
 Are tarpaulins in good condition and in accordance with rule requirements? *yes.*
 Are lashings provided in accordance with rule requirements? *yes.*

Particulars of fiddle, funnel and ventilator coamings: *Fiddle gratings fitted with hinged steel covers in good condition. Engine Room skylight is of steel & of strong construction. Fiddle ventilators and funnel in good condition.*

Particulars of Flush Bunker Scuttles: *4 on Bridge Deck. 18" dia. Scuttles not procurable. fitted with screw joint.*

Particulars of Companionways: *Entrance to Crews Quarters on Poop Deck of strong construction 5'-10" high above wood deck with 1 1/2" teak door 4'-4" x 25". 15" sill above wood deck.*

Particulars of Ventilators in exposed positions on freeboard and superstructure decks: *In Fore Well one 17" dia 31" high 40" to hold. In Poop. one 17" dia 25" high 38" to hold. one 8 1/2" " 25" " 25" to hold. one 8 1/2" " 25" " 25" to hold. on Bridge deck two 8 1/2" dia 24" " to Bunkers. Wood plugs and canvas covers to all vents. After Well. one 17" dia. 25" high 38" to hold.*

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks: *Starboard Side one 6" dia. 3" to mouth to fore peak. one 2 1/2" " 18" " to O.B. on Fore Well two 1 1/4" " 51" " to O.B. one 2 1/2" " 18" " to O.B. After Well. one 1 1/4" " 36" " to O.B. one 1 1/4" " 36" " to O.B. Poop one 2 1/4" " 6" to mouth above wood deck. to after peak. Snifting holes and wood plugs to all air pipes.*

Particulars of Gangway Cargo and Coaling Ports: *none.*

Particulars of Scuppers and Sanitary Discharge Pipes: *2 Bath & 3 W.C. discharges on Starboard side amidships with M.S. Storm valves discharge above upper deck. One W.C. discharge on Port side aft with M.S. Storm valves discharges above upper deck. Two 2 1/2" dia W.I. Scuppers from Bridge liveing decks led to Engine Room Bilges fitted with cocks.*

Particulars of Side Scuttles: *In Crew's Quarters aft side scuttles fitted with deadlights of substantial construction.*

Particulars of Guard Rails: *On Fore Well, rails 3'-0" high. 3 tiers. Stanchions 4'-9" apart. On Bridge deck rails 3'-0" high. 3 tiers. Stanchions 4'-9" apart. On Poop. rails 3'-0" high above wood dk, 3 tiers. Stanchions 5'-0" apart.*

Particulars of Gangways, Lifelines, etc.: *2" Wire lifelines and iron stanchions fitted on hatches on Starboard side in fore well and both sides of ship in aft well. Stanchions secured fitted. Wood gangways from hatches to Poop, Bridge & Fore Well ladders and between hatches in wells. Stanchions spaced about 13' apart. See sketch on back.*

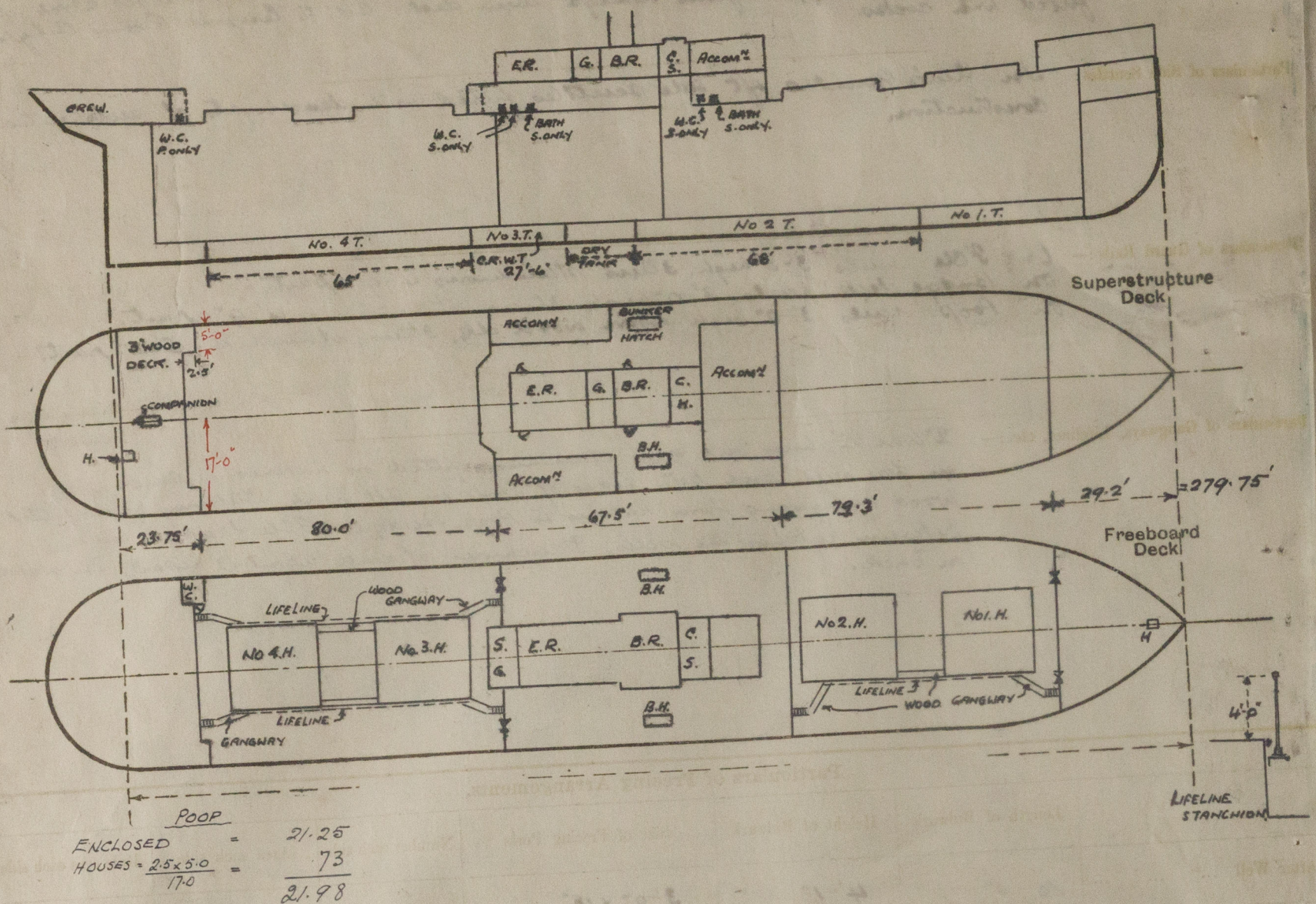
Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well	80'-0"	4'-1"	3'-0" x 18"	4	18 sq ft	16 sq ft
Forward Well	79'-4"	5'-2"	3'-0" x 18"	4	18 sq ft	16 sq ft

State position of each freeing port: *After Well: From Bridge ends, 10'-9", 26'-0", 49'-6" and 69'-6" } 12" above deck. (F. and A. position and height above deck edge) Forward Well: 19'-6", 40'-6" and 65'-9" }*
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: *Open ports with 2 rods.*

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	38"	3/4"	6 1/2" x 3' x 38"	27"	none	18' 0" x 24" in side house	15"	7'-0"
Raised Quarter Deck Bulkhead	none	3/4"	3' x 3' x 30"	24"	none	Two 4'-0" x 3'-0"	20"	7'-0"
Bridge, After Bulkhead	none	3/4"	7' 3" x 4' 8" B.A.	31"	Bats T.R.B.	none	18"	7'-0"
Bridge, Forward Bulkhead	44"	3/4"	2 1/2" x 2 1/2" x 32"	30"	none	Two 4'-6" x 4'-6"	18"	7'-0"
Forecastle Bulkhead	40"	3/4"	2 1/2" x 2 1/2" x 32"	30"	none	Two 4'-6" x 4'-6"	18"	7'-0"
Trunk, Aft	none	3/4"	3' x 2 1/2" x 32"	30"	none	none	18"	7'-0"
Trunk, Forward	none	3/4"	3' x 2 1/2" x 32"	30"	none	none	18"	7'-0"
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	34"	28"	3' x 2 1/2" x 32"	30"	Bats T.R.B.	Two 4'-6" x 2'-6"	18"	7'-3"
Exposed Machinery Casings on Superstructure Decks	30"	25"	3' x 2 1/2" x 32"	30"	none	none	18"	7'-0"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	30"	25"	3' x 2 1/2" x 32"	30"	none	none	18"	7'-0"
Deckhouses on Flush Deck Ships	none	3/4"	3' x 2 1/2" x 32"	30"	none	none	18"	7'-0"

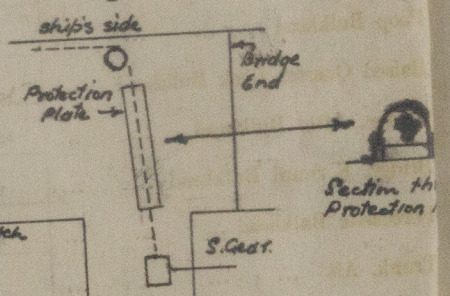
Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	One steel hinged door in port side house operated from both sides. Bats & handle.
Raised Quarter Deck Bulkhead	3" Weather Boards in riveted channels full height.
Bridge, After Bulkhead	no openings.
Bridge, Forward Bulkhead	2 1/2" Weather Boards in riveted channels full height.
Forecastle Bulkhead	Four steel hinged doors (Two to Engine Room, two to Fore Well) operated both sides.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	
Exposed Machinery Casings on Superstructure Decks	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	
Deckhouses on Flush Deck Ships	

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:— *Timber assignment is required.*

- Rule LXXX* The vessel has a forecabin and poop.
- Rule LXXXI* ~~with the forecabin and poop~~ has a longitudinal subdivision.
- Rule LXXXII* Bulwarks in fore will 5'-2" high supported by 7' x 3' x 48" B.A. stays on deck beams spaced 5'-0" apart. 7' x 3' x 48" B.A. rail bar.
- Rule LXXXIII* In after will Bulwark 4'-1" high supported by 6' x 3' x 48" B.A. stays on beams spaced 5'-0" apart. Rail Bar 7' x 3' x 48" B.A.
- Rule LXXXIV* The steering chains are led athwartships from Engine at after end of Engine casing then along ship's side behind Bulwark stays. Hand gear and quadrant on Poop - exposed. Not protected by deck-house nor hood. The Superintendent proposes to fit rolled plate as per sketch covering the chains led athwartships across Bridge end only.
- Rule LXXXV* Provision made for uprights by 3' x 3' x 3/4" angle riv'd to deck and 2 1/2" x 5/8" socket (9/2" x 9/2" inside) secured to Bulwark rail with 4-1/4" bolts. Spacing in fore will: 3'-8" from Bridge front, 11'-0", 11'-0", 20'-0", 10'-0" and 11'-6" in after will 12'-6" from Bridge end, 9'-6", 9'-6", 18'-0" and 9'-0". The 20'-0" space in fore will and 18'-0" space in after will are in way of mast shrouds.
- Rule LXXXIX* Strong eyeplates riv'd to sheer stake spaced 10'-0" apart and 6'-0" from Bridge front and ends to take lashing.
- Ship surveyed afloat. Not in dry dock.*



Builder's name and yard number *Grangemouth Dockyard & Co Ltd*

Names of sister ships

Owners *Dunholme Steamers Ltd.*

Fee £ *9 : 7 : -* Received by me

Request form.

ENCLOSURE



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