

REPORT ON MACHINERY.

No. 315-92.

Received at London Office

WED JUN. 26. 1912

Date of writing Report 22. 6. 12 When handed in at Local Office 22. 6. 12 Port of Glasgow

No. in Survey held at Troon.

Date, First Survey 27. 7. 11

Last Survey 21. 6. 1912

Reg. Book. T.S. "ITATINGA"

(Number of Visits 48)

Master R.E. McNeill Built at Troon.

By whom built Ailsa S.B. Co (No 247)

Tons { Gross
Net

When built 1912.

Engines made at Troon

By whom made Ailsa S.B. Co (No 31.)

when made 1912

Boilers made at Glasgow

By whom made D. Rowan (No 170)

when made 1912.

Registered Horse Power

Owners Companhia Nacional de

Port belonging to Rio de Janeiro

Nom. Horse Power as per Section 28 304.

Is Refrigerating Machinery fitted for cargo purposes yes.

Is Electric Light fitted yes.

ENGINES, &c.—Description of Engines T.S. Triple Expan. S. Condensing No. of Cylinders 36 each Engine No. of Cranks 3.

Dia. of Cylinders 16"-26"-42" Length of Stroke 30" Revs. per minute 124 Dia. of Screw shaft as per rule 8.65" Material of screw shaft as fitted 8 7/8" iron

Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes. Is the after end of the liner made water tight in the propeller boss yes. If the liner is in more than one length are the joints burned yes. If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive yes. If two liners are fitted, is the shaft lapped or protected between the liners yes. Length of stern bush 36"

Dia. of Tunnel shaft as per rule 8.02" Dia. of Crank shaft journals as per rule 8.42" Dia. of Crank pin 8 7/8" Size of Crank webs 5 1/8" Dia. of thrust shaft under collars 8 7/8" Dia. of screw 10-0" Pitch of Screw 12-0" No. of Blades 4 State whether moveable no Total surface 31.5-#

No. of Feed pumps 4 Diameter of ditto 2 1/2" Stroke 15" Can one be overhauled while the other is at work yes.

No. of Bilge pumps 2 Diameter of ditto 2 1/2" Stroke 15" Can one be overhauled while the other is at work yes.

No. of Donkey Engines 7 Sizes of Pumps 6" x 4" x 8" 9 1/2" x 7" x 18" 8" x 6" x 8" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 2-2 3/4" + 2-3" In Holds, &c. 2-2 1/4" + 2-3" aft 2-2 3/4"

In Engine Room 2-2 3/4" + 2-3" In Holds, &c. 2-2 1/4" + 2-3" aft 2-2 3/4"

No. of Bilge Injections 2 sizes 4 1/2" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size yes 3"

Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes Are the sluices on Engine room bulkheads always accessible none

Are all connections with the sea direct on the skin of the ship yes. Are they Valves or Cocks Both cocks & valves.

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes. Are the Discharge Pipes above or below the deep water line above

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel yes. Are the Blow Off Cocks fitted with a spigot and brass covering plate yes.

What pipes are carried through the bunkers Ballast Bilge in Cross-bunker How are they protected 2 1/2" wood casing.

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes.

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes.

Dates of examination of completion of fitting of Sea Connections and of Stern Tube and Screw shaft and Propeller 2. 4. 12.

Is the Screw Shaft Tunnel watertight yes. Is it fitted with a watertight door yes. worked from Cylinder platform.

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel Wm Beardmore & Co.

Total Heating Surface of Boilers 6005# Is Forced Draft fitted no. No. and Description of Boilers 2 main + 1 aux.

Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs. Date of test 29. 1. 12 No. of Certificate 11393 11394

Can each boiler be worked separately yes. Area of fire grate in each boiler 67.5# 30# No. and Description of Safety Valves to each boiler 2 spring loaded Area of each valve Main 7.06# Aus. 3.14# Pressure to which they are adjusted 185 lbs. Are they fitted with easing gear yes.

Smallest distance between boilers or uptakes and bunkers or woodwork 2-3" main 15-9" main 11-6" Length 10-6" Material of shell plates steel

Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Per centages of strength of longitudinal joint rivets plate Working pressure of shell by rules Size of manhole in shell

Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Length of plain part top bottom Thickness of plates crown bottom Description of longitudinal joint No. of strengthening rings

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space:

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each

Working pressure by rules Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

separately? Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

VERTICAL DONKEY BOILER—Manufacturers of Steel

No. _____ Description _____

Made at _____ By whom made _____ When made _____ Where fixed _____

Working pressure _____ tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safety _____

Values _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____

If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____ Dia. of donkey boiler _____ Length _____

Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long. seams _____

Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Plates _____

Working pressure of shell by rules _____ Thickness of shell crown plates _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____

Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____

Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Radius of do. _____ Stayed by _____

Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— Two connecting rod top end & 2 bottom end bolts & nuts, 2 main bearing bolts & nuts, 1 set of feed & bilge pump valves, 1 set of piston springs, a quantity of assorted bolts & nuts, & iron of various sizes—

The foregoing is a correct description,

FOR AILSA SHIPBUILDING CO., LIMITED

W. S. Watson.

Manufacturer.

Dates of Survey while building
During progress of work in shops— 1911. July 27. Aug. 7. 16. 18. 21. 29. Sept. 7. 18. 26. Oct. 4. 9. 16. 26. Nov. 2. 6. 16. 24.
During erection on board vessel— Dec. 8. 13. 19. 28. 1912. Jan. 9. 13. 21. Feb. 6. 16. 22. March 4. 11. 18. 25.
April 2. 12. 18. 23. 29. May 6. 8. 14. 17. 20. 29. June 4. 6. 11. 14. 15. 21.
Total No. of visits 48.

Is the approved plan of main boiler forwarded herewith

yes. *None*

Dates of Examination of principal parts—Cylinders 18. 3. 12. Slides 6. 2. 12. Covers 6. 2. 12. Pistons 6. 2. 12. Rods 12. 4. 12.
Connecting rods 23. 4. 12. Crank shaft 18. 3. 12. Thrust shaft 18. 3. 12. Tunnel shafts 18. 3. 12. Screw shaft 18. 3. 12. Propeller 17. 5. 12.
Stern tube 2. 4. 12. Steam pipes tested 17. 5. 12. Engine and boiler seatings 11. 3. 12. Engines holding down bolts 14. 5. 12.
Completion of pumping arrangements 11. 6. 12. Boilers fixed 29. 4. 12. Engines tried under steam 15. 6. 12.
Main boiler safety valves adjusted 11. 6. 12. Thickness of adjusting washers $P \frac{5}{16}$ $S \frac{11}{16}$ $P \frac{7}{16}$ $S \frac{7}{16}$ $A \frac{7}{16}$ $F n \frac{3}{8}$
Material of Crank shaft *Steel* Identification Mark on Do. 31. Material of Thrust shaft *Steel* Identification Mark on Do. 31.
Material of Tunnel shafts *Steel* Identification Marks on Do. 31. Material of Screw shafts *iron* Identification Marks on Do. 31.
Material of Steam Pipes *solid drawn copper* Test pressure 400 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c.) The workmanship & materials are good. The engines have been built under Special Survey, fitted on board along with the boilers, & satisfactorily tried under steam.

The machinery of this vessel is eligible in *our* opinion for a record of + L.M.C 6.12 in the Register Book.

This vessel has been fitted with a Refrigerating Installation for cargo purposes, but not under Special Survey, the R.M.C. not being required. Please see particulars for the Register Book attached.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 6.12.

The amount of Entry Fee £ 3 : - : When applied for, 24. 6. 12.
Special £ 21 : 18 :
Donkey Boiler Fee £ : :
Travelling Expenses (if any) £ 3 : 5 : When received, 26/6/12

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute GLASCOW 25 JUN. 1912

Assigned + L.M.C 6.12

Ref. Mch.



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GLASGOW REPORT No.

31592.

S/S "ITATINGA."

Do any trunkways pass through water-tight bulkheads are water-tight doors fitted and efficiently insulated

What means are adopted for closing the trunkways when carrying general cargo

The foregoing is a correct description.

Builders.

PARTICULARS TO BE ENTERED IN REGISTER BOOK.

REFRIGERATING MACHINES.					System of (1) Refrigerating (2) Insulating the Chambers.	POWER.		INSULATED CARGO CHAMBERS.	
No. and whether Single or Duplex.	Makers.	Date of Construction.	System.	Type.		Cubic feet of air delivered per hour.	Ice melting capacity per 24 hours. Tons.	No.	Capacity.
No 9 Single	J & E. Hall Dartford, Kent.	1912	CO ₂	Hall	Brine Cork	✓	8	4	8000 Cub.ft.

Fee £ : : { Fee applied for, 190

Travelling Expenses £ : : { Received by me, 190

Committee's Minute

Assigned

Surveyor to Lloyd's Register.

H. L. Pilditch.

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Foundation

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separately	Diameter	Length	Thickness of shell plates	Material	Description of longitudinal joint	Diam. of rivet
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