

REPORT ON MACHINERY.

Received at London Office

Date of writing Report 18/5/08 10 When handed in at Local Office _____ 10 Port of Dundee **TUES. 19 MAY 1908**

No. in Survey held at Sunderland & Dundee Date, First Survey 3rd March Last Survey 12th May 1908
 Reg. Book. _____ (Number of Visits 15 at Sunderland)
 on the Steel screw steamer TROPEIRO Tons { Gross 1367.14
 Net 788.53

Master M. Kiechlich Built at Dundee By whom built Dundee S.S. Co. Ltd When built 1908
 Engines made at Sunderland By whom made North Eastern Marine Eng Co when made 1908
 Boilers made at Sunderland By whom made North Eastern Marine Eng Co when made 1908
 Registered Horse Power ✓ Owners Empresa de Nav Sul-Rio-Grandense Port belonging to Rio-Grande
 Nom. Horse Power as per Section 28 141 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple Exp. See Sld. Rpt. No. 23674 No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 17-28-46 Length of Stroke 30 Revs. per minute 88 Dia. of Screw shaft 9.23 Material of screw shaft Iron
 as fitted 9.5
 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 ✓ 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 ✓ If two
 liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 3'-3"
 Dia. of Tunnel shaft 8.37 Dia. of Crank shaft journals 8.79 Dia. of Crank pin 8.7 Size of Crank webs 5.5" x 13.5" Dia. of thrust shaft under
 collars 8.7 Dia. of screw 11'-0" Pitch of Screw 13'-6" No. of Blades 4 State whether moveable no Total surface 42 sq ft
 No. of Feed pumps 2 Diameter of ditto 2.75 Stroke 15 Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 3 Stroke 15 Can one be overhauled while the other is at work yes
 No. of Donkey Engines two Sizes of Pumps Ballant = 6 x 7 x 9 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 2 @ 2" diam + one @ 2.5" In Holds, &c. No. 1 hold = 1 @ 2.5; 2 = 2 hold = 1 @ 2.5"
aft hold = 1 @ 2.5; tunnel one @ 2.5"
 No. of Bilge Injections 1 sizes 3.5" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size yes - 2.5"
 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
 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 none How are they protected ✓
 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 17.3.08 of Stern Tube 17.3.08 Screw shaft and Propeller 17.3.08
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top platform

BOILERS, &c.—(Letter for record (S)) Manufacture of Steel See Sunderland Rpt. No. 23674

Total Heating Surface of Boilers 2373 sq ft Forced Draft fitted no No. and Description of Boilers One Single Ended
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 9.12.07 No. of Certificate 2678
 Can each boiler be worked separately ✓ Area of fire grate in each boiler 63.8 sq ft No. and Description of Safety Valves to
 each boiler 2 Spring Area of each valve 7.07 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 18" Mean dia. of boilers 15-3.5" Length 10-8.5" Material of shell plates steel
 Thickness 1.3 Range of tensile strength 28.7 - 32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams d.r. lap
 long. seams L.R.D. 2.5 Diameter of rivet holes in long. seams 1.3 Pitch of rivets 9.5 Top of plates or width of butt straps 19.5"
 Per centages of strength of longitudinal joint rivets 86.7 Working pressure of shell by rules 180.1 lbs Size of manhole in end 16" x 12"
 plate 86.2
 Size of compensating ring flanged No. and Description of Furnaces in each boiler 3 Dighton Material Steel Outside diameter 47.5"
 Length of plain part top 9" Thickness of plates bottom 7.6" Description of longitudinal joint weld No. of strengthening rings ✓
 Working pressure of furnace by the rules 185 Combustion chamber plates: Material Steel Thickness: Sides 3/4 Back 2.5/3.2 Top 3/4 Bottom 7/8"
 Pitch of stays to ditto: Sides 8.3 x 12 Back 10.3 x 11.5 Top 8.3 x 12 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180.1
 Material of stays Steel area at smallest part 2.43 Area supported by each stay 116.7 Working pressure by rules 187 End plates in steam space:
 Material Steel Thickness 1.3 Pitch of stays 22.3 x 21.5 How are stays secured D.R. + W Working pressure by rules 182.7 Material of stays steel
area at smallest part 8.48 Area supported by each stay 490 sq in Working pressure by rules 180.3 Material of Front plates at bottom steel
 Thickness 1.3 Material of Lower back plate Steel Thickness 1.5 Greatest pitch of stays 14.5 x 11.5 Working pressure of plate by rules 180.5
 Diameter of tubes 3.5 Pitch of tubes 4.7 x 4.5 Material of tube plates Steel Thickness: Front 1.3 Back 1.3 Mean pitch of stays 10.28"
 Pitch across wide water spaces 14.5" Working pressures by rules 184.9 Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 8" x 2" Length as per rule 29.34 Distance apart 12" Number and pitch of stays in each 2 @ 8.3"
 Working pressure by rules 183 lbs Superheater or Steam chest; how connected to boiler none 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 —

