

# REPORT ON MACHINERY.

No. 33713

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Reg. Book. 62 Sup. on the S.S. "BANDRA" (Number of Visits 64) Gross Tons 3284 Net Tons 1844 When built 1914

Master H. W. Talent Built at Glasgow By whom built Barclay Curle & Co (N<sup>o</sup> 504)

Engines made at Glasgow By whom made Barclay Curle & Co (N<sup>o</sup> 504) when made 1914

Boilers made at do. By whom made do. (N<sup>o</sup> 504) when made 1914

Registered Horse Power 526 Owners British India S. N. Co. Ltd. Port belonging to Glasgow

Nom. Horse Power as per Section 28 524 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes

**ENGINES, &c.**—Description of Engines Triple Expansion Surf. Cond. No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 20" 34" 58" Length of Stroke 45" Revs. per minute 86 Dia. of Screw shaft 13 1/8" Material of screw shaft steel

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 liners fitted whole length two liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 4'-5"

Dia. of Tunnel shaft 11.52" Dia. of Crank shaft journals 12.1" Dia. of Crank pin 12 1/2" Size of Crank webs 8 1/2 x 16 1/8" Dia. of thrust shaft under collars 12 1/4" Dia. of screw 16'-3" Pitch of Screw 15'-6" No. of Blades 4 State whether moveable Yes Total surface 85 sq. ft.

No. of Feed pumps 2 Diameter of ditto 4 1/2" Stroke 22 1/2" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 22 1/2" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 3 Sizes of Pumps 1- 9 x 11 1/2 Gen. Service 1- 7 x 5 1/2 1- 6 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 2- 3 1/2", 2- 3 1/2" in stokehold and 1- 2 1/2" in Tunnel well. In Holds, &c. N<sup>o</sup> 1 - 2 x 3"; N<sup>o</sup> 2 - 2 x 3"; N<sup>o</sup> 3 - 2 x 3"

No. of Bilge Injections 1 sizes 8" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes 1-4"

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 Yes

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 below

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 Yes

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 10. 11. 13 of Stern Tube 10. 11. 13 Screw shaft and Propeller 10. 11. 13

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from P.R. upper deck level.

**BOILERS, &c.**—(Letter for record A.) Manufacturers of Steel Steel Co. of Scotland, Colville, Lanarkshire, Glasgow Iron Works Co.

Total Heating Surface of Boilers 9074 Is Forced Draft fitted Yes No. and Description of Boilers 3- Single Ended Marine

Working Pressure 215 lbs. Tested by hydraulic pressure to 430 lbs. Date of test 6. 8. 13. No. of Certificate 12255.

Can each boiler be worked separately Yes Area of fire grate in each boiler 62 sq. ft. No. and Description of Safety Valves to each boiler Pair springs loaded Area of each valve 8.29 sq. in. Pressure to which they are adjusted 220 lbs. Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 15'-2" Length 11'-6" Material of shell plates Steel

Thickness 1 5/8" Range of tensile strength 29/33 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams T.R. long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 5/8" Pitch of rivets 10" Lap of plates or width of butt straps 23"

Per centages of strength of longitudinal joint rivets 94.8 Working pressure of shell by rules 251 lbs. Size of manhole in shell 14" x 13" plate 83.75

Size of compensating ring 11" x 1 1/4" No. and Description of Furnaces in each boiler 3- Morrison Material Steel Outside diameter 4'-1 1/4"

Length of plain part 23" Thickness of plates 3/32" Description of longitudinal joint weld No. of strengthening rings 1" top 76 bottom 76

Working pressure of furnace by the rules 242 lbs. Combustion chamber plates: Material Steel Thickness: Sides 7/16" Back 7/16" Top 7/16" Bottom 1"

Pitch of stays to ditto: Sides 8" x 9" Back 8 1/2" x 8 1/2" Top 8" x 9" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 225 lbs

Material of stays Steel Diameter at smallest part 1.76" Area supported by each stay 72 sq. in. Working pressure by rules 215 lbs End plates in steam space: Material Steel Thickness 1 3/32" Pitch of stays 18" x 15 1/4" How are stays secured D. N's Working pressure by rules 232 lbs Material of stays Steel

Diameter at smallest part 7.24" Area supported by each stay 283 1/2 sq. in. Working pressure by rules 266 lbs Material of Front plates at bottom Steel

Thickness 7/16" Material of Lower back plate Steel Thickness 13/16" Greatest pitch of stays 16" x 11" Working pressure of plate by rules 318 lbs

Diameter of tubes 2 1/2" Pitch of tubes 3 3/4" x 3 3/4" Material of tube plates Steel Thickness: Front 7/16" Back 7/16" Mean pitch of stays 7 1/2" x 7 1/2"

Pitch across wide water spaces 13 1/2" Working pressures by rules 297 lbs. Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 10" x 25" (double) Length as per rule 2'-8" Distance apart 9" Number and pitch of stays in each 3 at 8"

Working pressure by rules 241 lbs. Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked separately Yes

holes Yes Diameter Yes Length Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet Yes Pitch of rivets Yes Working pressure of shell by rules Yes Diameter of flue Yes Material of flue plates Yes Thickness Yes

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

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

report. W.M.



