

REPORT ON MACHINERY

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Date of writing Report 10. 11. 1911 When handed in at Local Office 10. 11. 1911 Port of Middlesbrough

No. in Survey held at Middlesbrough Date, First Survey 28th Sept. 1910 Last Survey 21 Nov. 1911

Reg. Book 45 on the S.S. "Jeas" (Number of Visits 687) (Hull) 533

Master Built at Goole By whom built Goole S.B. & R. Co. Ltd. Tons Gross 533 Net 238

Engines made at Middlesbrough By whom made Richardsons, Westgarth & Co. Ltd. when made 1911

Boilers made at do By whom made do when made 1911

Registered Horse Power Owners C. P. Hutchinson Port belonging to Hull

Tom. Horse Power as per Section 28 78 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

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

Dia. of Cylinders 13, 21, 35 Length of Stroke 24 Revs. per minute Dia. of Screw shaft as per rule 7.59 as fitted 8.4 Material of screw shaft Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liners Is the after end of the liner made water tight

Is the propeller boss Cedar 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 3-0

Dia. of Tunnel shaft as per rule 5.93 as fitted 6.5 Dia. of Crank shaft journals as per rule 6.2 as fitted 6.83 Dia. of Crank pin 7 Size of Crank webs 1 1/2 x 4 3/4 Dia. of thrust shaft under collars 7 Dia. of screw 9.9 Pitch of Screw 11-0 No. of Blades 4 State whether moveable No Total surface 30 sq. ft.

No. of Feed pumps 2 Diameter of ditto 2 1/2 Stroke 12 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 3 Stroke 12 Can one be overhauled while the other is at work Yes

No. of Donkey Engines Two Sizes of Pumps 6x6x6, 4 1/2 x 2 1/2 x 5 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Two 2 1/2 In Holds, &c. Forward one 2 1/2, aft two 2 1/2

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

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

That 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 9-10-11 of Stern Tube 1-11-11 Screw shaft and Propeller 1-11-11

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from top grating

BOILERS, &c.—(Letter for record (5) Manufacturers of Steel John Spencer Sons Ltd.

Total Heating Surface of Boilers 1386 sq. ft. Is Forced Draft fitted No No. and Description of Boilers One S.E. cyl. mult.

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 1.6.11 No. of Certificate 4663

Can each boiler be worked separately Yes Area of fire grate in each boiler 46 1/2 sq. ft. No. and Description of Safety Valves to each boiler Two direct spring Area of each valve 5.9 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 8 Mean dia. of boilers 12-6 Length 10-3 Material of shell plates Steel

Thickness 1 1/2 Range of tensile strength 28 3/4 - 32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams B.R. lap

Long. seams B.R. S. rivets Diameter of rivet holes in long. seams 1 1/8 Pitch of rivets 7 1/8 Lap of plates or width of butt straps 16 1/4

Percentages of strength of longitudinal joint rivets 90.1 plate 85.09 Working pressure of shell by rules 187 lbs Size of manhole in shell 16 x 12

Size of compensating ring Flanged No. and Description of Furnaces in each boiler Three plain Material Steel Outside diameter 3-1

Length of plain part top 6-6 bottom 9-6 Thickness of plates crown 25/32 bottom 86/8 mean Description of longitudinal joint Welded No. of strengthening rings 1

Working pressure of furnace by the rules 192 lbs Combustion chamber plates: Material Steel Thickness: Sides 23/32 Back 21/32 Top 23/32 Bottom 15/16

Pitch of stays to ditto: Sides 11 x 8 1/2 Back 10 3/8 x 8 3/4 Top 11 x 8 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 185 lbs

Material of stays Steel Diameter at smallest part 2.09 Area supported by each stay 93.5 Working pressure by rules 185 End plates in steam space:

Material Steel Thickness 1 1/8 Pitch of stays 18 1/4 x 18 How are stays secured B.R. + W Working pressure by rules 182 lbs Material of stays Steel

Diameter at smallest part 5.94 Area supported by each stay 308 Working pressure by rules 200 Material of Front plates at bottom Steel

Thickness 1 Material of Lower back plate Steel Thickness 29/32 Greatest pitch of stays 15 1/4 x 8 3/4 Working pressure of plate by rules 184

Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates Steel Thickness: Front 1 Back 3/4 Mean pitch of stays 11 1/4 x 9

Pitch across wide water spaces 14 1/4 Working pressures by rules 189 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 9 3/4 x 1 7/8 Length as per rule 2-10 17/32 Distance apart 11 Number and pitch of stays in each 308

Working pressure by rules 250 lbs Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked separately Yes

Diameter Yes Length Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivets Yes

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

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



