

REPORT ON MACHINERY.

No. 27960 SAT. OCT. 23 1920

Received at London Office

Date of writing Report 20-10-20 When handed in at Local Office 21-10-20 Port of Chunderland
 No. in Survey held at Chunderland Date, First Survey 1 Aug 19 Last Survey 14 Oct 1920
 Reg. Book. on the Steel S.S. INSTON. (Number of Visits)
 Master Built at Cuth Shields By whom built Messrs. C. Kennoldson & Co. (N:185) When built 1920
 Engines made at Chunderland By whom made Messrs. Macboll & Pollock, Ltd. (N:311) when made 1920
 Boilers made at do By whom made do do do do when made 1920
 Registered Horse Power 235 Owners S. Instone & Co. Port belonging to London
 Horse Power as per Section 28 235 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

GINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3
 No. of Cylinders 20, 33, 54 Length of Stroke 36" Revs. per minute 80 Dia. of Screw shaft 11.6" Material of Inpt. steel
 as per rule 11.6" as fitted 11.7" screw shaft
 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
 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
 tiers are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 3-11 1/2"
 Dia. of Tunnel shaft 10.1" Dia. of Crank shaft journals 10.5" Dia. of Crank pin 10 3/4" Size of Crank webs 20 1/2 x 6 3/8" Dia. of thrust shaft under
 as fitted 10.5" as fitted 10 3/4"
 Bars 10 3/4" Dia. of screw 14-6" Pitch of Screw 13-9" No. of Blades 4 State whether moveable No Total surface 65 sq ft
 No. of Feed pumps 2 Diameter of ditto 3" Stroke 20" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 3" Stroke 20" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 3 Sizes of Pumps 6 1/2 x 8 1/2 x 8; 6 x 4 x 6; 5 1/4 x 3 1/2 x 5 No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room 4 @ 2 1/2 In Holds, &c. Inp. Hold 1-3 1/2; No. 1 Hold 2-2 1/2 (Prs); No. 2 Hold 2-2 1/2 (Prs);
 No. 3 Hold 2-2 1/2 (Prs) No. 4 Hold 1-2 1/2 Innet well 1-2 1/2
 No. of Bilge Injections 1 sizes 6" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size 4 @ 3 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 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 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 None
 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
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Upper platform

MILERS, &c.—(Letter for record S) Manufacturers of Steel John Spencer & Sons, Ltd.
 Total Heating Surface of Boilers 4164 sq ft Is Forced Draft fitted No No. and Description of Boilers Two single ended Marine
 Working Pressure 190 Tested by hydraulic pressure to 380 Dates of test 31-5-20; 8-6-20 Nos. of Certificates 3692, 3694
 Can each boiler be worked separately Yes Area of fire grate in each boiler 58 sq ft No. and Description of Safety Valves to
 each boiler Two spring loaded Area of each valve 5.93 sq in Pressure to which they are adjusted 195 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 14-0" Mean dia. of boilers 15-0" Length 10-6" Material of shell plates Steel
 Thickness 1 1/3" Range of tensile strength 29 3/4 to 33 3/4 lbs Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R.
 Long. seams D.B., T.R. Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 1/3" Lap of plates or width of butt straps 18 1/2"
 Percentages of strength of longitudinal joint rivets 86 Working pressure of shell by rules 192 Size of manhole in shell 16 x 12
 plate 85.8
 Size of compensating ring 29 x 28 1/2 x 1 1/4" No. and Description of Furnaces in each boiler Three; Brighton Material Steel Outside diameter 48 1/2"
 Length of plain part top 5/8" crown 5/8" Description of longitudinal joint Welded No. of strengthening rings 1
 bottom 5/8" bottom 5/8"
 Working pressure of furnace by the rules 207.6 Combustion chamber plates: Material Steel Thickness: Sides 4 1/4" Back 11" Top 4 5/8" Bottom 15"
 Pitch of stays to ditto: Sides 8 1/2 x 8 1/2" Back 8 1/2 x 10" Top 8 1/2 x 10 1/4" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 196
 Material of stays Steel Area at smallest part 1.73 sq in Area supported by each stay 72.25 sq in Working pressure by rules 191.5 End plates in steam space:
 Material Steel Thickness 1 1/2" Pitch of stays 24 x 16" How are stays secured D.N. + W. Working pressure by rules 196 Material of stays Steel
 Area at smallest part 7.24 sq in Area supported by each stay 384 sq in Working pressure by rules 196 Material of Front plates at bottom Steel
 Thickness 1 1/4" Material of Lower back plate Steel Thickness 3/32" Greatest pitch of stays 13 1/4" Working pressure of plate by rules 194.5
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2 x 4 1/2" Material of tube plates Steel Thickness: Front 1 1/4" Back 5/32" Mean pitch of stays 13 5/16 x 9"
 Pitch across wide water spaces 14 1/4" Working pressures by rules 195 Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 7 3/8 x 2 1/2" Length as per rule 28" Distance apart 10 1/4" Number and pitch of stays in each 2 @ 8 1/2"
 Working pressure by rules 193 Steam dome: description of joint to shell None % of strength of joint None
 Diameter None Thickness of shell plates None Material None Description of longitudinal joint None Diam. of rivet holes None
 Pitch of rivets None Working pressure of shell by rules None Crown plates None Thickness None How stayed None

SUPERHEATER. Type None Date of Approval of Plan None Tested by Hydraulic Pressure to None
 Date of Test None Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler None
 Diameter of Safety Valve None Pressure to which each is adjusted None Is Easing Gear fitted None



