

REPORT ON MACHINERY.

No. 74,371

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Date of writing Report 16/4/1921 When handed in at Local Office Newcastle-on-Tyne Port of Newcastle-on-Tyne
 No. in Survey held at Reg. Book. Newcastle-on-Tyne Date, First Survey 2nd Sept. 1920 Last Survey 14th April 1921
 on the s.s. 'Etbylene' (Number of Visits 19)
 Master Built at Newcastle By whom built Wood Stemmier & Co. Ltd When built 1921
 Engines made at Wallsend. By whom made North Eastern Marine Engineering Co. Ltd when made 1921
 Boilers made at -do By whom made -do [Contract no 2592] when made 1921
 Registered Horse Power Owners Gaslight & Coke Co Port belonging to
 Nom. Horse Power as per Section 28 116.85 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 16", 26", 43" Length of Stroke 27" Revs. per minute as per rule 8.83 Material of screw shaft Scrap Iron
 as fitted 9 1/4" 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 3'-3 1/2"
 Dia. of Tunnel shaft as per rule 7.75 Dia. of Crank shaft journals as per rule 8.14 Dia. of Crank pin 8 1/4" Size of Crank webs 1 1/2" x 5 1/4" Dia. of thrust shaft under
 as fitted none as fitted 8 1/4" collars 8 1/4" Dia. of screw 11'-0" Pitch of Screw 11'-0" No. of Blades 4 State whether moveable No Total surface 38 sq ft
 No. of Feed pumps 2 Diameter of ditto 2 1/2" Stroke 13 1/2" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 2 1/2" Stroke 13 1/2" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps Ballast: 9" x 11" x 10" Feed: 4 1/2" x 3" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room E.R. 1-3 Stokehold 1-3 In Holds, &c. Ford. 2-2 1/2" Alf 4-3"

No. of Bilge Injections 1 sizes 5" Connected to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size 1'-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 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 Same level.
 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.
 Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door Yes worked from

BOILERS, &c.—(Letter for record) Manufacturers of Steel John Spencer & Sons.
 Total Heating Surface of Boilers 2,000 sq ft Is Forced Draft fitted No No. and Description of Boilers One S.E. Multitubular.
 Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 26. 11. 20 No. of Certificate 9489.
 Can each boiler be worked separately Yes Area of fire grate in each boiler 57 sq ft No. and Description of Safety Valves to
 each boiler 2 Spring Loaded. Area of each valve 5.94 sq in Pressure to which they are adjusted Yes Are they fitted with easing gear Yes.
 Smallest distance between boilers or uptakes and bunkers or woodwork 1'-2" outside Mean dia. of boilers 14'-6" Length 10'-6" Material of shell plates Steel.
 Thickness 1 1/8" Range of tensile strength 28 1/2" - 32 1/2" Are the shell plates welded or flanged No. Descrip. of riveting: cir. seams D.R.-L.
 long. seams TR. D.B. Diameter of rivet holes in long. seams 1 1/32" Pitch of rivets 9 3/4" Top of plates on width of butt straps 1'-7 1/2"
 Per centages of strength of longitudinal joint rivets 87.4% Working pressure of shell by rules 180 Size of manhole in F.E. Plate 16" x 12"
 plate 86.8% Size of compensating ring Flanged. No. and Description of Furnaces in each boiler 3. Deighton. Material Steel Outside diameter 3'-7"
 Length of plain part top 17 1/2" Thickness of plates crown 17 1/2" Description of longitudinal joint Welded. No. of strengthening rings 34 wings
 bottom 17 1/2" Working pressure of furnace by the rules 190 Combustion chamber plates: Material steel Thickness: Sides 23/32" Back 23/32" Top 23/32" Bottom 15/16"
 Pitch of stays to ditto: Sides 9 3/8" x 10 1/2" Back 9 3/8" x 10 1/2" Top 10 3/8" x 10 1/2" If stays are fitted with nuts or riveted heads Nuts. Working pressure by rules 180
 Material of stays steel Area at smallest part 2.03 Area supported by each stay 10 1/2" x 9 3/8" Working pressure by rules 185 End plates in steam space:
 Material steel Thickness 1 1/32" Pitch of stays 25" x 22 1/2" How are stays secured D.N. & W. Working pressure by rules 182 Material of stays steel.
 Area at smallest part 9.62 Area supported by each stay 556.25 Working pressure by rules 180 Material of Front plates at bottom steel
 Thickness 1" Material of Lower back plate steel. Thickness 15/16" Greatest pitch of stays 14 1/2" x 10 1/2" Working pressure of plate by rules 189
 Diameter of tubes 3 1/4" Pitch of tubes 4 3/8" x 4 1/2" Material of tube plates steel. Thickness: Front 1" Back 1 1/16" Mean pitch of stays 9 5/8"
 Pitch across wide water spaces 14 1/2" Working pressures by rules 182 Girders to Chamber tops: Material steel. Depth and
 thickness of girder at centre 9 3/8" x 15 1/8" Length as per rule 2'-10" Distance apart 10 3/8" Number and pitch of stays in each 2'-10 3/8"
 Working pressure by rules 182 Steam dome: description of joint to shell Yes % of strength of joint Yes
 Diameter Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet holes Yes
 Pitch of rivets Yes Working pressure of shell by rules Yes Crown plates Yes Thickness Yes How stayed Yes

SUPERHEATER. Type Yes Date of Approval of Plan Tested by Hydraulic Pressure to
 Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler
 Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

If not, state whether, and when, one will be sent. Is a Report also sent on the Hull of the Ship?

M. Kirkley

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