

Rpt. 4.

REPORT ON MACHINERY.

No. 30,558

Received at London Office

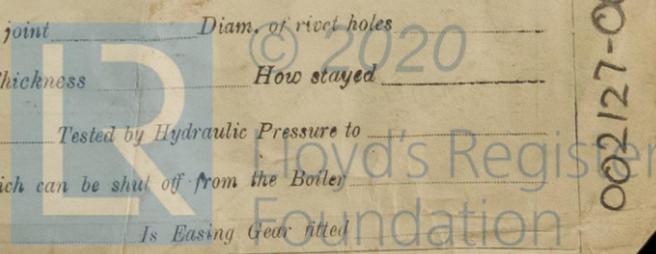
Date of writing Report 19 When handed in at Local Office 6/6/18 Port of Hull.
 No. in Survey held at Hull. Date, First Survey 22/10/18 Last Survey 5/4/1918
 Reg. Booh. on the Thomas Booth (Number of Visits 57) Gross 290
 Master Built at Beverley. By whom built Cook, Helton & Gemmell, Ltd. When built 1918.
 Engines made at Hull. By whom made Amos & Smith, Ltd. (No. 2938) when made 1918.
 Boilers made at Hull. By whom made Charles Shipbuilding & Engin. Co. Ltd. when made 1918.
 Registered Horse Power Owners British Admiralty Port belonging to ✓
 Nom. Horse Power as per Section 28 84. 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 12½" - 21" - 35" Length of Stroke 26" Revs. per minute 114 Dia. of Screw shaft as per rule 4.56" Material of Iron.
 as fitted 4/5" screw shaft) 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 34"
 Dia. of Tunnel shaft as per rule 6.54" Dia. of Crank shaft journals as per rule 6.9" Dia. of Crank pin 4/8" Size of Crank webs 14" x 4 1/16" Dia. of thrust shaft under
 collars 4/8" Dia. of screw 9' 6" Pitch of Screw 11' 1/2" No. of Blades 4. State whether moveable No. Total surface 35 1/2 sq. ft.
 No. of Feed pumps 2. Diameter of ditto 2½" Stroke 12" Can one be overhauled while the other is at work Yes.
 No. of Bilge pumps 2. Diameter of ditto 2½" Stroke 12" Can one be overhauled while the other is at work Yes.
 No. of Donkey Engines 2 & 3 ejector. Sizes of Pumps 6" x 3" x 6" & 6" x 4" x 6". No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room One 2" fore, one 2" aft & one 2" bilge aft. In Holds, &c. One 2" from fore hold, one 2" from
 slush well, also separate 2" ejector suction from slush well.
 No. of Bilge Injections 1 sizes 3½". Connected to condenser, or to circulating pump Pump. Is a separate Donkey Suction fitted in Engine room of size 2 1/4" ejector.
 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 Forward suction. How are they protected Hood covering.
 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.

BOILERS, &c.—(Letter for record S) Manufacturers of Steel John Spencer & Sons, Ltd.
 Total Heating Surface of Boilers 1590 sq. ft. Is 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 20-4-18. No. of Certificate 3286.
 Can each boiler be worked separately ✓ Area of fire grate in each boiler 48.45 sq. ft. No. and Description of Safety Valves to
 each boiler Two spring loaded. Area of each valve 4.9 sq. in. 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 11½" INT. dia. of boilers 162" Length 10' 6 1/2" Material of shell plates Steel.
 Thickness 1 3/32" Range of tensile strength 28/32 tons. Are the shell plates welded or flanged No. Descrip. of riveting: cir. seams double.
 long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 5/32" Pitch of rivets 8" Lap of plates or width of butt straps 14"
 Per centages of strength of longitudinal joint rivets 89.3. Working pressure of shell by rules 180 lbs. Size of manhole in shell 16" x 12".
 plate 85.5. No. and Description of Furnaces in each boiler 3 plain. Material Steel. Outside diameter 40 9/16".
 Size of compensating ring 9" x 1 3/32". Length of plain part top 8 1/2" Thickness of plates crown 25" Description of longitudinal joint Welded. No. of strengthening rings ✓
 bottom 7 1/2" Thickness of plates bottom 32". Working pressure of furnace by the rules 188 lbs. Combustion chamber plates: Material Steel. Thickness: Sides 4/16" Back 2 1/32" Top 1/16" Bottom 1/8".
 Pitch of stays to ditto: Sides 9 1/2" x 9 3/8" Back 9" x 9" Top 9 1/2" x 9 1/2" If stays are fitted with nuts or riveted heads Nuts. Working pressure by rules 181 lbs.
 Material of stays Steel. Area at smallest part 2.07 sq. in. Area supported by each stay 90.25 sq. in. Working pressure by rules 206 lbs. End plates in steam space:
 Material Steel. Thickness 1/16" Pitch of stays 1 1/32" x 1 1/4". How are stays secured D.N. & W. Working pressure by rules 181 lbs. Material of stays Steel.
 Area at smallest part 6.10 sq. in. Area supported by each stay 295 sq. in. Working pressure by rules 215. Material of Front plates at bottom Steel.
 Thickness 3 1/32" Material of Lower back plate Steel. Thickness 15/16". Greatest pitch of stays 14" x 9". Working pressure of plate by rules 219.
 Diameter of tubes 3 1/2". Pitch of tubes 5" x 4 3/4". Material of tube plates Steel. Thickness: Front 3 1/32" Back 1/8". Mean pitch of stays 10".
 Pitch across wide water spaces 14". Working pressures by rules 184". Girders to Chamber tops: Material Steel. Depth and
 thickness of girder at centre 8 1/2" x 1 3/4". Length as per rule 32". Distance apart 9 1/2". Number and pitch of stays in each Two, 9 1/2".
 Working pressure by rules 194". Steam dome: description of joint to shell % of strength of joint

SUPERHEATER. Type _____ 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 _____

002127-002137-0033



IS A DONKEY BOILER FITTED? *No.*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Two top end bolts & nuts, two bottom end bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set of air, feed & bilge pump valves, one set of piston studs & nuts, three condenser tubes, three boiler tubes, one escape valve spring each size, two donkey pump suction & delivery valves and a quantity of assorted bolts & nuts & iron of various sizes.

The foregoing is a correct description,

FOR AMOS & SMITH LTD.

W. Prachenbury

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } *1917: Oct 22, Nov 19, 23, 26, Dec 3, 4, 8, 10, 21, 31, 1918: Jan 8, 16, 22, 23, 24, 25, 29, 28, 31, Feb 4, 7, 9, 11.*
{ During erection on board vessel --- } *13, 14, 20, 21, 25, 28, Mar 6, 8, 11, 13, 15, 18, 20, 22, 25, 27, Apr 2, 5, 10, 11, 12, 15, 18, 19, 20, 25, May 1, 8, 16, 18, 23, 30, Jun 3, 5*
Total No. of visits *57*

Is the approved plan of main boiler forwarded herewith *previously sent*

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Dates of Examination of principal parts—Cylinders *20-2-18*, Slides *13-3-18*, Covers *11-2-18*, Pistons *11-2-18*, Rods *13-3-18*, Connecting rods *2-4-18*, Crank shaft *11-4-18*, Thrust shaft *11-4-18*, Tunnel shafts Screw shaft *24-1-18* Propeller *29-1-18*, Stern tube *29-1-18*, Steam pipes tested *25-4-18*, Engine and boiler seatings *29-1-18*, Engines holding down bolts *25-4-18*, Completion of pumping arrangements *30-5-18*, Boilers fixed *25-4-18*, Engines tried under steam *18-5-18*, Completion of fitting sea connections *29/1/18*, Stern tube *29/1/18*, Screw shaft and propeller *29/1/18*, Main boiler safety valves adjusted *18-5-18*, Thickness of adjusting washers *P. 1/32" S. 3/8"*

Material of Crank shaft *Iron*, Identification Mark on Do. *1864 P.F.* Material of Thrust shaft *Iron*, Identification Mark on Do. *1868 P.F.* Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts *Iron*, Identification Marks on Do. *1852 G.A.* Material of Steam Pipes *Solid drawn copper*, Test pressure *360 lbs.*

Is an installation fitted for burning oil fuel Is the flash point of the oil to be used over 150°F.

Have the requirements of Section 49 of the Rules been complied with

Is this machinery duplicate of a previous case *Yes*. If so, state name of vessel *"Patrick Bowe"*

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery of this vessel has been constructed under special survey in accordance with the approved plans and the rules of this Society. The materials and workmanship are good; the boilers and steam pipes have been tested as above and found sound and good. The machinery has been properly fitted and secured on board the vessel and on completion was tested at full power for two hours as required by the Admiralty and found satisfactory.

The safety valves have been adjusted under steam and tested for accumulation which did not exceed 190 lbs.

In my opinion the vessel is eligible for the record + L.M.C. 6.18.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 6.18.

H.W.D. 10/6/18. A.R.S.

Frank Stanger, J. W. Reid, Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 2 : 0 :
Special ... £ 26 : 2 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 7-6-18
When received, 8-6-18

TUE 11 JUN 1918

Committee's Minute

Assigned

+ L.M.C. 6:18



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Certificate (if required) to be sent to
The Surveyors are requested not to write on or below the space for Committee's Minute.