

REPORT ON MACHINERY.

No. 30998

Date of writing Report 19 When handed in at Local Office 3/4/19 Port of Hull. Received at London Office SAT. 5-APR. 1919

No. in Survey held at Hull Date, First Survey 15/5/18 Last Survey 24/3/1919

Reg. Book. on the Griffith Griffith ("Castle" Class Drawler) (Number of Visits 61)

Master Built at Beverley By whom built Cook Welton & Gemmell & Co. Tons Gross 290. Net 127 When built 1919

Engines made at Hull By whom made Amos & Smith Ltd (n^o. 2963) when made 1919

Boilers made at Hull By whom made Amos & Smith Ltd (n^o. 2962) when made 1919

Registered Horse Power Owners British Admiralty. Port belonging to

Nom. Horse Power as per Section 28 87.86 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 12 1/2"-21" & 35" Length of Stroke 26" Revs. per minute 112 Dia. of Screw shaft as per rule 7.5" Material of screw shaft iron

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 34"

Dia. of Tunnel shaft as per rule 6.5" Dia. of Crank shaft journals as per rule 6.95 6.91 Dia. of Crank pin 7 1/8" Size of Crank webs 14" x 4 1/2" Dia. of thrust shaft under collars 7 1/8" Dia. of screw 9'-6" Pitch of Screw 11'-1 1/2" No. of Blades 4 State whether moveable No. Total surface 35.5 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 2 1/2" Stroke 12" Can one be overhauled while the other is at work Yes.

No. of Donkey Engines 2 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" engine room one 2" aft & one 2" fore In Holds, &c. One 2" from forehold one 2" from slushwell also separate 2" ejector suction from slushwell.

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

Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Valves & Cocks.

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 Sections. How are they protected Wood Casings.

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 Yes.

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Port Dalbot Steel Co. Ltd - Port Dalbot.

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 21/12/18 No. of Certificate 3342.

Can each boiler be worked separately Yes. Area of fire grate in each boiler 48.75 sq ft No. and Description of Safety Valves to each boiler two spring loaded Area of each valve 4.9 sq ft 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 12 1/2" INT. diam. of boilers 16 1/2" 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" Top of plates on width of butt straps 17"

Per centages of strength of longitudinal joint rivets 89.3 plate 85.5 Working pressure of shell by rules 180 lbs. Size of manhole in shell 16" x 12"

Size of compensating ring 9" x 1 3/32" No. and Description of Furnaces in each boiler 3 plain Material steel Outside diameter 40 7/16"

Length of plain part top 8 1/2" bottom 7 6" Thickness of plates crown 2 3/32" bottom 3 5/32" Description of longitudinal joint welded. No. of strengthening rings —

Working pressure of furnace by the rules 188 Combustion chamber plates: Material steel Thickness: Sides 1/16" Back 3/32" Top 1/16" Bottom 7/8"

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 182.

Material of stay steel. Area at smallest part 2.07 sq ft Area supported by each stay 90.25 sq ft Working pressure by rules 206 End plates in steam space: Material steel Thickness 1 1/16" Pitch of stays 17 3/8" x 17" How are stays secured DN & W Working pressure by rules 181 Material of stays steel

Area at smallest part 6.1 sq ft Area supported by each stay 295 sq ft Working pressure by rules 215 Material of Front plates at bottom steel.

Thickness 3 1/32" Material of Lower back plate steel. Thickness 1 5/16" 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 7/8" 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 197 lbs. Steam dome: description of joint to shell % of strength of joint Yes.

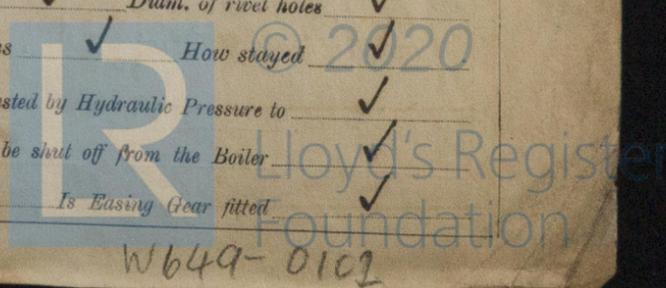
Diameter Yes. Thickness of shell plates Yes. Material Yes. Description of longitudinal joint Yes. Diam. of rivet holes Yes.

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 Yes. Tested by Hydraulic Pressure to Yes.

Time of Test Yes. Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes.

Diameter of Safety Valve Yes. Pressure to which each is adjusted Yes. Is Easing Gear fitted Yes.



IS A DONKEY BOILER FITTED? No.

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:-

Two top & two bottom end bolts & nuts, one set coupling bolts & nuts, two main bearing bolts & nuts, one set each of Air Reed & Bilge Pump Valves, one set piston studs & nuts, three condenser tubes, three boiler tubes, one escape valve spring of each size, two donkey pump suction & delivery valves, a quantity of assorted bolts & nuts, & iron of assorted sizes.

The foregoing is a correct description,

FOR AMOS & SMITH LTD.

H. Peckhambury

Manufacturer.

Dates of Survey while building: During progress of work in shops - 1918: May 15, 22, Jun 7, 14, 18, 20, 25, 29, Jul 3, 8, 19, 11, 15, 26, 30, Aug 3, 13, 15, 22, 24. During erection on board vessel - 26, 29, Sep 2, 5, 10, 14, 17, 30, Oct 28, Nov 28, 29, Dec 5, 11, 16, 17, 18, 20, 21, 30, 1919: Jan 2, 4, 7, 10, 11, 13, 22, 24, 31, Mar 3, 5, 6, 7, 8, 11, 14, 15, 17, 19, 22, 24. Total No. of visits 67. Is the approved plan of main boiler forwarded herewith previously sent? Yes.

Dates of Examination of principal parts: Cylinders 28/11/18, Slides 5/12/18, Covers 5/12/18, Pistons 5/12/18, Rods 11/12/18, Connecting rods 11/12/18, Crank shaft 5/12/18, Thrust shaft 16/12/18, Tunnel shafts, Screw shaft 24/8/18, Propeller 24/8/18, Stern tube 24/8/18, Steam pipes tested 10/1/19, Engine and boiler seatings 11/12/18, Engines holding down bolts 11/3/19, Completion of pumping arrangements 19/3/19, Boilers fixed 11/3/19, Engines tried under steam 15/3/19, Completion of fitting sea connections 26/8/18, Stern tube 26/8/18, Screw shaft and propeller 26/8/18, Main boiler safety valves adjusted 15/3/19, Thickness of adjusting washers P 3/8" B S 23/64, Material of Crank shaft steel, Identification Mark on Do. 2981 WNS, Material of Thrust shaft steel, Identification Mark on Do. 2982 WNS 1909 JR, Material of Tunnel shafts, Identification Marks on Do., Material of Screw shafts iron, Identification Marks on Do., Material of Steam Pipes Copper (solid drawn), Test pressure 360 lbs/sq, Is an installation fitted for burning oil fuel? Yes, Is the flash point of the oil to be used over 150°F? Yes, Have the requirements of Section 49 of the Rules been complied with? Yes, Is this machinery duplicate of a previous case? Yes, If so, state name of vessel John Gauntlett.

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 & the Rules of the Society. The material & workmanship are good. The boiler & steam pipes have been tested as above & found sound & good. The machinery has been properly fitted & secured on board the vessel & on completion was tested at full power for two hours as required by the Admiralty & found satisfactory. The safety valves have been adjusted under steam & accumulation did not exceed 10lbs. In my opinion the vessel is eligible for the record + L.M.C. 3, 19.

Hull.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 3. 19.

W.D. 7/4/19 W. Stone

Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee, £ 2 : 0 : - When applied for, Special £ 26 : 2 : - 26/3 1919 Donkey Boiler Fee £ : : : When received, 27/3 1919 Travelling Expenses (if any) £ : : :

Committee's Minute FEB. APR. 11. 1919 TUE SEP 7 1920 Assigned + L.M.C. 3. 19 TUE MAR 22 1921



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Certificate (if required) to be sent to the Surveyors...