

Rpt. 4.

## REPORT ON MACHINERY.

No. 30986

FRI. 28 MAR. 1919

Date of writing Report

19

When handed in at Local Office

27/3 1919 Port of Hull.

Received at London Office

No. in Survey held at Hull

Date, First Survey 7-6-18 Last Survey Mar. 17 1919

Reg. Book.

(Number of Visits)

on the John Gauntlett ("Castle" Class Drawler)

Master

Built at Beverley

By whom built Cook, Welton &amp; Gemmell Ltd

Engines made at Hull

By whom made Amos &amp; Smith Ltd (No. 2962)

when made 1918

Boilers made at Hull

By whom made Charles Ship &amp; Eng. Co. Ltd (No. 2966)

when made 1918

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 12½"-21" & 35" Length of Stroke 26" Revs. per minute 113 Dia. of Screw shaft as per rule 7.5" as fitted 7½" 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 ✓ 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 6.5" as fitted 6¾" Dia. of Crank shaft journals as per rule 6.91" as fitted 6.95" Dia. of Crank pin 7½" Size of Crank webs 14" x 4½" Dia. of thrust shaft under collars 7½" Dia. of screw 9-6" Pitch of Screw 11-1½" No. of Blades 4 State whether moveable No. Total surface 35.5 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 ejector Sizes of Pumps 6"x3"x6" & 6"x4"x6" No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room One 2" engine room one 2" aft & one 2" for? In Holds, &c. One 2" from forehold one 2" from shushwell also separate 2" ejector suction from shushwell  
No. of Bilge Injections One sizes 3½" 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 ✓  
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 Suctions 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 ✓ Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &amp;c.—(Letter for record S) Manufacturers of Steel Port Talbot Steel Co. Ltd—Port Talbot.

Total Heating Surface of Boilers 15900 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 1/11/18 No. of Certificate 3332.  
Can each boiler be worked separately ✓ 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 11" INT. dia. of boilers 162" Length 10'-6½" Material of shell plates steel.  
Thickness 1½" 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 1½" Pitch of rivets 8" Lap of plates or 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 1½" No. and Description of Furnaces in each boiler 3 plain Material steel Outside diameter 40½"  
Length of plain part top 8½" bottom 7½" Thickness of plates crown 3½" bottom 3½" 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 9½" x 9¾" Back 9" x 9" Top 9½" x 9½" stays are fitted with nuts or riveted heads nuts. Working pressure by rules 182  
Material of stays 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 1/16" Pitch of stays 17½" x 17" How are stays secured DN & W Working pressure by rules 181 Material of stays steel  
Area at smallest part 6.10 sq ft Area supported by each stay 295 sq ft Working pressure by rules 215 Material of Front plates at bottom steel  
Thickness 3/32" Material of Lower back plate steel Thickness 1/16" Greatest pitch of stays 14" x 9" Working pressure of plate by rules 219  
Diameter of tubes 3½" Pitch of tubes 5" x 4¾" Material of tube plates steel Thickness: Front 3/32" 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 8½" x 1¼" Length as per rule 32" Distance apart 9½" Number and pitch of stays in each two 9½"  
Working pressure by rules 197 lbs. Steam dome: description of joint to shell % of strength of joint ✓  
Diameter ✓ Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ Diam. of rivet holes ✓  
Pitch of rivets ✓ Working pressure of shell by rules ✓ Crown plates ✓ Thickness ✓ How stayed ✓  
SUPERHEATER. Type ✓ Date of Approval of Plan ✓ Tested by Hydraulic Pressure to 2030  
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 ✓

W710-0270

Lloyd's Register Foundation



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 Feed & 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.

W. Kachembury

Manufacturer.

Dates of Survey while building  
During progress of work in shops -- 1918 Jun 7-14-18-20-29-30 July 3-8-9-15-22-24-27 Aug 21-23-24-29 Sep 2-9-12-14-19-23-25-27-30 Oct 3-7  
During erection on board vessel -- 10-17-22-28-Nov 1-4-18-Dec 3-5-11-17-18-30-1919 Jan 2-4-7-11-22-24-31 Mar 3-5-6-7-8-11-16-19  
Total No. of visits 54.

Is the approved plan of main boiler forwarded herewith

previously sent.

Dates of Examination of principal parts—Cylinders 14/11/18 Slides 11/12/18 Covers 11/12/18 Pistons 18/11/18 Rods 18/11/18  
Connecting Rods 11/12/18 Crank shaft 3/12/18 Thrust shaft 3/12/18 Tunnel shafts ✓ Screw shaft 27/7/18 Propeller 27/7/18  
Stern tube 27/7/18 Steam pipes tested 4/1/19 Engine and boiler seatings 3/12/18 Engines holding down bolts 7/3/19  
Completion of pumping arrangements 14/3/19 Boilers fixed 7/3/19 Engines tried under steam 8/3/19  
Completion of fitting sea connections 3/8/18 Stern tube 3/8/18 Screw shaft and propeller 3/8/18  
Main boiler safety valves adjusted 8/3/19 Thickness of adjusting washers P 3/8" S 3/8"  
Material of Crank shaft steel Identification Mark on Do. 2978 WNS Material of Thrust shaft steel Identification Mark on Do. 2979 WNS  
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts iron Identification Marks on Do. 1901 JR  
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

John Graham.

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 Materials & Workmanship are good. The boiler & steam pipe have been tested & 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 8 lbs.

In my opinion the vessel is eligible for the record + L.M.C. 3.19.

It is submitted that  
this vessel is eligible for  
THE RECORD. + L.M.C. 3.19.

The amount of Entry Fee ... £ 2 : - : When applied for.  
Special ... £ 26 : 2 : - 24.3 1919  
Donkey Boiler Fee ... £ : : When received.  
Travelling Expenses (if any) £ : : 26/3 1919

Committee's Minute

TUE 1-APR. 1919

TUE SEP. 7 1920

Assigned

+ L.M.C. 3.19

FRI. 1 JUL. 1921



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