

REPORT ON MACHINERY.

No. 8200

Date of writing Report 25th Aug 1919 When handed in at Local Office 10 Port of Belfast THU. 11 SEP.
 No. in Survey held at Belfast Date, First Survey 17th Oct 1918 Last Survey 19th Aug 1919
 Reg. Book. S.S. "Gorgona" (ex "Gorica") (Number of Visits 48) Gross 5150 Net 3150
 Master Warkman Clark Built at Belfast By whom built Warkman Clark When built 1919
 Engines made at Belfast By whom made Warkman Clark when made -
 Boilers made at Belfast By whom made Warkman Clark when made -
 Registered Horse Power 517 Owners British India S. S. Coy Ltd Port belonging to Glasgow
 Nom. Horse Power as per Section 28 518 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

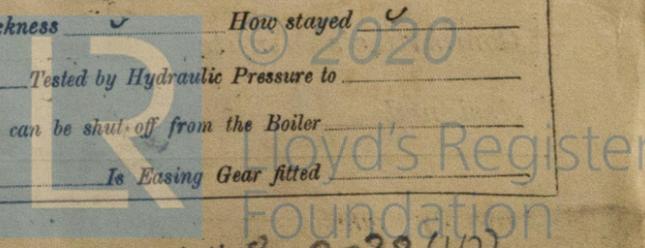
ENGINES, &c.—Description of Engines Single Screw Triple Expansion of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 27-44-73 Length of Stroke 48 Revs. per minute 78 Dia. of Screw shaft 14.5 Material of Steel
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is 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 No 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 60 1/2
 Dia. of Tunnel shaft 13.3 as per rule 13.9 Dia. of Crank shaft journals 13.5 as fitted 14.5 Dia. of Crank pin 14 1/2 Size of Crank webs 28 x 9 Dia. of thrust shaft under
 collars 14 3/4 Dia. of screw 17-6 Pitch of Screw 16-6 No. of Blades 4 State whether moveable Yes Total surface 102 1/2 sq ft.
 No. of Feed pumps 2 Diameter of ditto 4 Stroke 24 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 4 Stroke 24 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines See other sheets No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 4-3 1/2 In Holds, &c. 9-3 1/2 1-3

No. of Bilge Injections 1 sizes 12 Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes-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 Except manholes Both 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 Below
 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 Four hold suction 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 top platform E. Room

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Port Talbot Steel Works
 Total Heating Surface of Boilers 7668 sq ft Forced Draft fitted Yes No. and Description of Boilers 3 Single End Cylinders
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 24-6-19 No. of Certificate 547
 Can each boiler be worked separately Yes Area of fire grate in each boiler 63 1/2 sq ft No. and Description of Safety Valves to
 each boiler 2 Swallow Spring Area of each valve 9.62 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 2 ft Man. dia. of boilers 15-6 Length 11-6 Material of shell plates Steel
 Thickness 1 1/2 Range of tensile strength 28-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Lap D. Riv
 long. seams D. Butt Lap Diameter of rivet holes in long. seams 1 5/16 Pitch of rivets 9 1/8 Lap of plates or width of butt straps 19 1/2
 Per centages of strength of longitudinal joint 88.3 Working pressure of shell by rules 182 lbs Size of manhole in shell 16 x 12
 Size of compensating ring Plate Flange and Description of Furnaces in each boiler 3-Deighton Material Steel Outside diameter 50 3/8
 Length of plain part top 5 Thickness of plates bottom 3 3/32 Description of longitudinal joint Weld No. of strengthening rings -
 Working pressure of furnace by the rules 88 lbs Combustion chamber plates: Material Steel Thickness: Sides 3/32 Back 1/16 Top 3/32 Bottom 3/32
 Pitch of stays to ditto: Sides 10 1/8 x 9 1/4 Back 9 1/2 x 8 3/4 Top 10 1/8 x 9 1/4 If stays are fitted with nuts or riveted heads Nuts inside Working pressure by rules 180 lbs
 Material of stays Steel Area at smallest part 2 3/8 x 3 1/4 Area supported by each stay 98 1/2 sq ft Working pressure by rules 186 lbs End plates in steam space:
 Material Steel Thickness 1 1/2 Pitch of stays 21 1/2 x 21 1/2 How are stays secured Nuts Working pressure by rules 180 lbs Material of stays Steel
 Area at smallest part 8.29 sq ft Area supported by each stay 45 9 3/8 sq ft Working pressure by rules 187 lbs Material of Front plates at bottom Steel
 Thickness 3/8 Material of Lower back plate Steel Thickness 3/32 Greatest pitch of stays 13 5/8 Working pressure of plate by rules 189 lbs
 Diameter of tubes 2 1/4 Pitch of tubes 4 x 3 3/8 Material of tube plate Steel Thickness: Front 3/32 Back 3/4 Mean pitch of stays 2 x 7 1/4
 Pitch across wide water spaces 13 5/8 Working pressures by rules 181 lbs Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 10 x (5 x 2) Length as per rule 35 1/16 Distance apart 10 5/8 Number and pitch of stays in each 3-9 1/4
 Working pressure by rules 182 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 -
 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 -

W48-0028 (112)



IS A DONKEY BOILER FITTED? No If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— La Othen Sheet

The foregoing is a correct description,
FOR WORKMAN, CLARK & CO., LIMITED.

J. Cunningham Manufacturer.

Dates of Survey while building { During progress of work in shops -- } 1918:— Dec 17 to 19th Aug 1919
 { During erection on board vessel --- }
 Total No. of visits 48 Is the approved plan of main boiler forwarded here with plans
 " " " donkey " " "

Dates of Examination of principal parts—Cylinders 17 - 18 Rides 18 Covers 5 Pistons 5 Rods
 Connecting rods 4-7-19 Crank shaft 10 Thrust shaft 78 Tunnel shafts 5 Screw shaft 2-7-19 Propeller 2-7-19
 Stern tube 2-7-19 Steam pipes tested 25-6-19 Engine and boiler seatings 8-8-19 Engines holding down bolts 8-8-19
 Completion of pumping arrangements 19-8-19 Boilers fixed 8-8-19 Engines tried under steam 12-8-19
 Completion of fitting sea connections 2-7-19 Stern tube 29-7-19 Screw shaft and propeller 29-7-19
 Main boiler safety valves adjusted 12-8-19 Thickness of adjusting washers 8-13-19

Material of Crank shaft I.C. Iron Identification Mark on Do. LLOYDS R.J.B. 30-5-19 Material of Thrust shaft do Identification Mark on Do. LLOYDS R.J.B. 27-6-19
 Material of Tunnel shafts do Identification Marks on Do. LLOYDS R.J.B. 13-6-19 Material of Screw shafts do Identification Marks on Do. LLOYDS R.J.B. 2-7-19
 Material of Steam Pipes W. Iron Test pressure 600 lbs sq
 Is an installation fitted for burning oil fuel No 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 S. Ballygalley Head

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

The machinery of this vessel has been constructed under Special Survey, and in accordance with the Rules. The workmanship, and the materials are of good description, and on trial in Belfast Lough the machinery worked satisfactorily. In our opinion, it is eligible for records + L.M.C. 8-19, with notations "Forced Draft" and "Electric Light".

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 8.19. F.D.

J.W.D.
15/9/19 R.P.J.

R. F. Bennett Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee	£ 3 : 0 :	When applied for,
Special	£ 45 : 18 :	6-9-1919
Donkey Boiler Fee	£ :	When received,
Travelling Expenses (if any)	£ :	12-9-1919

Committee's Minute TUE 16 SEP 1919
 Assigned + L.M.C. 8.19
 F.D.



Certificate (if required) to be sent to this office

The Surveyors are requested not to write on or below the space for Committee's Minute.

S.S. Gograj
Auxiliary Pumps

- 1 Ballast 10 1/2" x 14" x 24" ✓
- 2 Feed 10 1/2" x 8" x 24" ✓
- 1 General 9 1/2" x 7" x 18" ✓
- 1 Ash Ejector 12" x 8" x 10" ✓
- 1 Sighting 6" x 6" x 15" ✓

Principal Items of Spare Gear

- 1 Propeller Shaft ✓
- 1 Propeller ✓
- 1/2" Crank Shaft ✓
- 1 Eccentric Strap ✓
- 1 Top end brass ✓
- 1 - and 1 bottom half main bearing ✓
- 2 Connecting Rod top end bolts & nuts ✓
- 2 - - - - - bottom - - - - - ✓
- 2 Main bearing bolts & nuts ✓
- 6 Shaft coupling bolts & nuts ✓
- 2 Feed Pump Valves ✓
- 2 Rife - - - - - ✓
- 3 Main feed Check Valves ✓
- 3 Donkey - - - - - ✓
- 50 Bolts & nuts assorted ✓
- 6 Studs of each size in Bailen mountings ✓
- 6 Gylinders cover studs & nuts ✓
- 6 Steam chest - - - - - ✓
- Bars flat & round iron ✓
- 12 Condenser tubes & 50 ferrules ✓
- 6 Air Pump valves ✓
- 1 Feed pump escape valve spring ✓
- 12 Bailen tubes plain ✓
- Sets gear for Auxiliary Pumps. ✓

R. P. Bewick

7-19
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VDS
J.B
6-19
VDS
J.B
2-7-19

Humphrey
ping.