

REPORT ON MACHINERY

No. 15180

25 NOV. 1915

Received at London Office

Date of writing Report 22nd Nov. 1915 When handed in at Local Office 23/11/15 Port of West Hartlepool
 No. in Survey held at W. Hartlepool Date, First Survey 19th Jan. 15 Last Survey 20th Nov. 1915
 Reg. Book. on the steel screw steamer "Eastgate" (W. Gray & Co's SS No 861) (Number of Volls 107) Gross 4276.67
 Master D.S. Ramsdale Built at W. Hartlepool By whom built Central Marine Engine Works When built 11-1915
 Engines made at W. Hartlepool By whom made Central Marine Engine Works when made 1915
 Boilers made at W. Hartlepool By whom made Central Marine Engine Works when made 1915
 Registered Horse Power 421 Owners Turnbull Scott Shipping Co. Ltd., 24 St. Mary Ave., London, E.C. Port belonging to London
 Nom. Horse Power as per Section 28 421 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted No.

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders three (3) No. of Cranks three (3)
 Dia. of Cylinders 25", 41", 68" Length of Stroke 48" Revs. per minute 68 Dia. of Screw shaft as per rule 14.48 Material of 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 59"
 Dia. of Tunnel shaft as per rule 12.69 Dia. of Crank shaft journals as per rule 13.32 Dia. of Crank pin 13 1/2" Size of Crank webs 18 1/2" x 8" Dia. of thrust shaft under
 collars 13 1/2" Dia. of screw 18-0" Pitch of Screw 16-6" No. of Blades 4 State whether moveable No. Total surface 102 sq. ft.
 No. of Feed pumps two (2) Diameter of ditto 3 3/4" Stroke 28" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps two (2) Diameter of ditto 3 3/4" Stroke 28" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines three (3) Sizes of Pumps 7 1/2" x 5" x 6" Duplex No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room four (4), 3 1/2" 7 1/2" x 5 1/2" x 12" Duplex In Holds, &c. eight (8), 3 1/2", in tunnel, one, 3 1/2"

No. of Bilge Injections two, sizes 6 1/2" Connected to condenser, or to circulating pump pump 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 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 Suctions to forward How are they protected Wood-cased
 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
 Dates of examination of completion of fitting of Sea Connections 19/11/15 of Stern Tube 19/11/15 Screw shaft and Propeller 19/11/15
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel D. Colville & Sons; J. Spencer & Sons
 (2 Main & one Auxiliary) Total Heating Surface of Boilers 7501 sq. ft. Is Forced Draft fitted No. No. and Description of Boilers Two (2); Cylindrical, Single ended
 Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs. Date of test 20/8/15 No. of Certificate 3412
 Can each boiler be worked separately Yes Area of fire grate in each boiler 75 1/2 sq. ft. No. and Description of Safety Valves to
 each boiler Two (2), Spring Area of each valve 9.62 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 20" Mean dia. of boilers 17-6" Length 11-6" Material of shell plates Steel
 Thickness 1 1/32" Range of tensile strength 28/32 tons Are the shell plates welded or flanged No. Descrip. of riveting: cir. seams double, lapped
 long. seams double, double strap Diameter of rivet holes in long. seams 1 7/16" Pitch of rivets 9 5/8" Lap of plates or width of butt straps 2 1/2"
 Per centages of strength of longitudinal joint rivets 89 Working pressure of shell by rules 182 lbs. Size of manhole in shell 16" x 12"
 Size of compensating ring Flanged No. and Description of Furnaces in each boiler four (4), Brighton's Material Steel Outside diameter 47 5/8"
 Length of plain part top 19" Thickness of plates bottom 32" Description of longitudinal joint welded No. of strengthening rings Corrugated
 Working pressure of furnace by the rules 197 lbs. Combustion chamber plates: Material Steel Thickness: Sides 10/16" Back 10/16" Top 10/16" Bottom 14/16"
 Pitch of stays to ditto: Sides 8 3/4" x 8 1/2" Back 9" x 8 1/4" Top 8 3/4" x 8 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 181 lbs.
 Material of stays Steel Diameter at smallest part 1.508" Area supported by each stay 9" x 8 1/4" Working pressure by rules 193 lbs. End plates in steam space:
 Material Steel Thickness 1 3/8" Pitch of stays 25" x 19" How are stays secured double nuts Working pressure by rules 181 lbs. Material of stays Steel
 Diameter at smallest part 3.286" Area supported by each stay 25" x 19" Working pressure by rules 185 lbs. Material of Front plates at bottom Steel
 Thickness 1 5/16" Material of Lower back plate Steel Thickness 3 1/2" Greatest pitch of stays 16 1/2" x 9" Working pressure of plate by rules 183 lbs.
 Diameter of tubes 3 1/2" Pitch of tubes 4 3/4" Material of tube plates Steel Thickness: Front 1" Back 3/4" Mean pitch of stays 9 1/2"
 Pitch across wide water spaces 14 1/2" Working pressures by rules 182 lbs. Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 10 1/4" x 1 1/4" Length as per rule 33 3/8" Distance apart 8 3/4" Number and pitch of stays in each 3, 8 1/2"
 Working pressure by rules 182 lbs. Superheater or Steam chest, how connected to boiler Can the superheater be shut off and the boiler worked
 separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet
 holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
 If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed
 Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

IS A DONKEY BOILER FITTED? No.

If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied:— 2 connecting rod top and 2 bottom end bolts & nuts; 2 main bearing bolts & nuts; one set of coupling bolts; 2 feed pump & 2 bilge pump valves; 1 set of H.P. piston springs; one screw shaft fitted with continuous gun metal liner; one propeller & assorted bolts & nuts & iron bars.

The foregoing is a correct description.

FOR THE CENTRAL MARINE ENGINE WORKS.

(W. GRAY & Co., Ltd.)

John B. Williams Manufacturer.

Dates of Survey while building
During progress of work in shops -- 1915 Jan 19 20 29 Feb 4 24 May 5 6 7 11 13 14 17 20 June 2
During erection on board vessel -- 26 27 29 30 Aug 9 10 11 12 13 16 17 18 19 20 24 25 27 30 31 Sep 1 2 20 21 22 23 24 27 28 29 Oct 1 4
Total No. of visits 101

Is the approved plan of main boiler forwarded herewith Yes.

" " " donkey " " " Yes.

Dates of Examination of principal parts—Cylinders 19/10/15 Slides 26/10/15 Covers 5/11/15 Pistons 25/10/15 Rods 22/10/15

Connecting rods 22/10/15 Crank shaft 13/10/15 Thrust shaft 14/10/15 Tunnel shafts 8/11/15 Screw shaft 5/10/15 Propeller 12/10/15

Stern tube 1/10/15 Steam pipes tested 23/9/15 19 25/10/15 11/11/15 Engine and boiler seatings 5/10/15 Engines holding down bolts 8/11/15

Completion of pumping arrangements 10/11/15 Boilers fixed 15/10/15 Engines tried under steam 12/11/15

Main boiler safety valves adjusted 12/11/15 Thickness of adjusting washers Port Boiler, — Port valve 13/16; Starb. valve 3/4

Material of Crank shaft Steel Identification Mark on Do. 5608 Material of Thrust shaft Steel Identification Mark on Do. 5608

Material of Tunnel shafts Steel Identification Marks on Do. 5608 Material of Screw shafts Iron Identification Marks on Do. 5608

Material of Steam Pipes Steel, lap welded Test pressure 550 lbs.

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.S. "Hawker" (W. Gray & Co.'s SS No. 861)

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

Evaporator fitted on board — coils of same having been tested to 400 lbs. & body to 50 lbs. water pressure.

The Engines & Boilers of this steamer have been constructed under special survey & fitted on board in accordance with the Society's Rules. They are now, in my opinion, in safe working condition & the case is respectfully submitted for the record of LMC 9, 15 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD, & LMC 11.15.

2 SB & 1 Aux SB

The amount of Entry Fee ... £ 3 : — + When applied for, 24/11/15
Special ... £ 41 : 1 : —
Donkey Boiler Fee ... £ : : : :
Travelling Expenses (if any) £ : : : : 25/11/15 26/11/15

Committee's Minute FRI. 26 NOV. 1915

Assigned + LMC 11.15

Machinery Certificate



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