

REPORT ON MACHINERY.

No. 27614

Received at London Office

Date of writing Report 19 When handed in at Local Office 22.9.19 Port of SUNDERLAND
No. in Survey held at Sunderland Date, First Survey 7 Mar 19 Last Survey 22.9.1919
Reg. Book. Steel 1/3 "DAGENHAM" on the (Number of Visits 24) Gross 2178
Master Brown Built at Sunderland By whom built Messrs. Armstrong, Whitworth & Co. (252) When built 1919
Engines made at Sunderland By whom made Messrs. Macdonald, Paterson (307) when made 1919
Boilers made at Sunderland By whom made Messrs. Macdonald, Paterson (307) when made 1919
Registered Horse Power Owners John Hudson & Co. Ltd. Port belonging to London
Nom. Horse Power as per Section 28 231 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 21, 35, 58 Length of Stroke 39 Revs. per minute 77 Dia. of Screw shaft 12.05 as per rule 12.02 Material of screw shaft 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 No If two
liners are fitted, is the shaft lapped or protected between the liners No Length of stern bush 4-1
Dia. of Tunnel shaft 10.57 as per rule 10.55 Dia. of Crank shaft journals 11.10 as per rule 11.07 Dia. of Crank pin 11.3 Size of Crank webs 16.5 x 7.5 Dia. of thrust shaft under
collars 11.3 Dia. of screw 15.0 Pitch of Screw 16.0 No. of Blades 4 State whether moveable No Total surface 75.5
No. of Feed pumps 2 Diameter of ditto 3.5 Stroke 20 Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 3.5 Stroke 20 Can one be overhauled while the other is at work Yes
No. of Donkey Engines 2 Sizes of Pumps 6.5 x 8.5 x 8, 1 x 4 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 3, 3" In Holds, &c. 2 3/4 hold 2 3/4, 2 main hold, 2 after hold
No. of Bilge Injections 1 sizes 5.5 Connected to condenser on to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 3.5
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 No
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 None How are they protected No
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 upper platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Spinning Mills
Total Heating Surface of Boilers 3616 Is Forced Draft fitted No No. and Description of Boilers Two single end
Working Pressure 18.16 Tested by hydraulic pressure to 36.16 Date of test 9.8.19, 18.8.19 No. of Certificate 3596, 3598
Can each boiler be worked separately Yes Area of fire grate in each boiler 59.5 No. and Description of Safety Valves to
each boiler 2 Spring Valves Area of each valve 6.93 Pressure to which they are adjusted 18.5 Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers or woodwork 16 Mean dia. of boilers 14.5 Length 10.6 Material of shell plates S
Thickness 1.5 Range of tensile strength 29.5 x 33.5 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Lap joint
long. seams 1.5, 1.5, 1.5, 1.5 Diameter of rivet holes in long. seams 1.76 Pitch of rivets 8.5 Lap of plates or width of butt straps 17.5
Per centages of strength of longitudinal joint rivets 88.7 plate 85.1 Working pressure of shell by rules 18.4 Size of manhole in shell 12 x 16
Size of compensating ring 7.5 x 1.5 No. and Description of Furnaces in each boiler 3 Plain Material S Outside diameter 3.8
Length of plain part top 5-9 bottom 5-9 Thickness of plates crown 3.5 bottom 3.5 Description of longitudinal joint Weld No. of strengthening rings
Working pressure of furnace by the rules 18.5 Combustion chamber plates: Material S Thickness: Sides 1/8 Back 1/8 Top 1/8 Bottom 1/8
Pitch of stays to ditto: Sides 11 x 8.5 Back 11 x 8.5 Top 10.5 x 8.5 If stays are fitted with nuts or riveted heads No Working pressure by rules 18.2
Material of stays S Area at smallest part 2.03 Area supported by each stay 95.0 Working pressure by rules 18.2 End plates in steam space:
Material S Thickness 1.5 Pitch of stays 15 x 23 How are stays secured 1.5 x 1.5 Working pressure by rules 18.5 Material of stays S
Area at smallest part 6.10 Area supported by each stay 345.0 Working pressure by rules 18.3 Material of Front plates at bottom S
Thickness 1 Material of Lower back plate S Thickness 3/32 Greatest pitch of stays 13.4 Working pressure of plate by rules 18.5
Diameter of tubes 3.5 Pitch of tubes 4.5 x 4.5 Material of tube plates S Thickness: Front 1 Back 3/32 Mean pitch of stays 14.5 x 9
Pitch across wide water spaces 14.5 Working pressures by rules 18.2 Girders to Chamber tops: Material S Depth and
thickness of girder at centre 7.5 x 2 Length as per rule 28 Distance apart 10.5 Number and pitch of stays in each 2, 8.5
Working pressure by rules 18.7 Steam dome: description of joint to shell No % of strength of joint No
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 No. 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

004405-004410-0019

IS A DONKEY BOILER FITTED?

NO

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:—

Two top end, two bottom end connecting rod bolts and nuts, two main bearing bolts, one set coupling bolts, one set fuel and tail pump valves assembly bolts and nuts, 200 of various sizes.

The foregoing is a correct description,

MACCOLL & POLLOCK, LTD.

G. R. Pollock

Manufacturer.

Dates of Survey while building

During progress of work in shops
During erection on board vessel
Total No. of visits

1919 Mar 7.18 Apr 4.25 May 5.14.22 Jun 6.20.30 Jul 15.27.28 Aug 19.27.28.29 Sep 3.10

15.22

(24)

Is the approved plan of main boiler forwarded herewith ☒

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 22.5.19 Slides 14.5.19 Covers 22.5.19 Pistons 20.6.19 Rods 20.6.19
Connecting rods 20.6.19 Crank shaft 14.5.19 Thrust shaft 20.6.19 Tunnel shafts 13.8.19 Screw shaft 18.7.19 Propeller 14.5.19
Stern tube 30.6.19 Steam pipes tested 10.4.19, 24.8.19 Engine and boiler seatings 11.8.19 Engines holding down bolts 3.9.19

Completion of pumping arrangements 22.8.19 Boilers fixed 3.9.19 Engines tried under steam 10.9.19

Completion of fitting sea connections 11.8.19 Stern tube 22.8.19 Screw shaft and propeller 22.8.19

Main boiler safety valves adjusted 10.9.19 Thickness of adjusting washers P. 13 1/2 P. 7 5/8 S. 13 1/2 P. 7 5/8

Material of Crank shaft Steel Identification Mark on Do. 4893JAW Material of Thrust shaft Steel Identification Mark on Do. 307GAH

Material of Tunnel shafts Steel Identification Marks on Do. 307GAH Material of Screw shafts Steel Identification Marks on Do. 307GAH

Material of Steam Pipes 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 ☒ If so, state name of vessel Ss 'Hornchurch'

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

The machinery of this vessel has been built under special survey. The materials and workmanship are sound and good and under the vessel ship in my opinion to have merit of + L.M.C. 9.19.

It is submitted that
this vessel is eligible for
THE RECORD + L.M.C. 9.19.

The amount of Entry Fee ... £

Special ... £ 48 : 8

Donkey Boiler Fee ... £

Travelling Expenses (if any) £

When applied for,

23 SEP 1919

When received,

4/10/19

Engine Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

+ L.M.C. 9.19

MACHINERY CERTIFICATE
No. 1114



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Foundation