

REPORT ON MACHINERY.

No. 34146

Received at London Office WED. SEP. 26 1917.

Date of writing Report 23. 7. 1917 When handed in at Local Office 19 Port of GLASGOW

No. in Survey held at Glasgow Date, First Survey 8. 3. 15 Last Survey 19. 9. 1917

Reg. Book. 515 "Glenlyon" (Number of Visits 61)

Master Built at Glasgow By whom built G. Bonnell & Co. Tons Gross 1917

Engines made at Glasgow By whom made Dunsanuir Jackson & Co. (H&Y) when made 1917

Boilers made at ditto By whom made ditto (H&Y) when made 1917

Registered Horse Power Owners Port belonging to Glasgow

Nom. Horse Power as per Section 28 510 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 24" H&Y 42" Length of Stroke 48 Revs. per minute 48 Dia. of Screw shaft 14.67" 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 turned 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 60 1/2

Dia. of Tunnel shaft 13 1/2" Dia. of Crank shaft journals 13.9" Dia. of Crank pin 14 1/4" Size of Crank webs 15 1/2 x 28 Dia. of thrust shaft under collars 14 1/4" Dia. of screw 14.6 Pitch of Screw 18.6 No. of Blades 4 State whether moveable Yes Total surface 95 1/2

No. of Feed pumps 2 Diameter of ditto 4" Stroke 26 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4 1/4" Stroke 26 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 4 Sizes of Pumps 7-9 1/2, 2 1/2, 4 1/2, 7-8, 1 1/2, 1 1/2, 1 1/2 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 4. 3 1/2 (2 in Eng Room 1 1/2 in boiler room. In Holds, &c. 2 3 1/2 in each hold. Tunnel well 1 1/2

No. of Bilge Injections 1 sizes 5 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

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

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 23. 7. 17 of Stern Tube 23. 7. 17 Screw shaft and Propeller 23. 7. 17

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from UER Platform

BOILERS, &c.—(Letter for record) Manufacturers of Steel James Dunlop, Skill & Co. Bonnell & Co. Spence

Total Heating Surface of Boilers 4447 Is Forced Draft fitted Yes No. and Description of Boilers 3 Single ended

Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 22. 3. 17 No. of Certificate 13435

Can each boiler be worked separately Yes Area of fire grate in each boiler 49.84 No. and Description of Safety Valves to each boiler Double Spring Area of each valve 8.6 Pressure to which they are adjusted 18 1/2 Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 2 1/2 Mean dia. of boilers 15 1/8 Length 12.6 Material of shell plates S

Thickness 13 1/8 Range of tensile strength 28/32 Are the shell plates welded or flanged Yes Descrip. of riveting: cir. seams DR

long. seams TR.DBS Diameter of rivet holes in long. seams 17/16 Pitch of rivets 97/8 Lap of plates or width of butt straps 1.9 5/8

Per centages of strength of longitudinal joint rivets 88.5 plate 85.3 Working pressure of shell by rules 208 Size of manhole in shell 16 x 12

Size of compensating ring 4 1/4 x 13 1/8 No. and Description of Furnaces in each boiler 3 corrugated Material S Outside diameter 3.109/16

Length of plain part top bottom Thickness of plates crown 3 9/16 Description of longitudinal joint welded No. of strengthening rings

Working pressure of furnace by the rules 204 Combustion chamber plates: Material S Thickness: Sides 11/16 Back 11/16 Top 11/16 Bottom 7/8

Pitch of stays to ditto: Sides 9 1/4 x 18 7/8 Back 9 1/4 x 14 1/4 Top 8 7/8 x 9 1/8 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 194

Material of stays S Diameter at smallest part 9 1/4 x 3 3/8 Area supported by each stay 95 Working pressure by rules 210 End plates in steam space:

Material S Thickness 3/32 Pitch of stays 18 1/4 x 15 1/4 How are stays secured DN Working pressure by rules 188 Material of stays S

Diameter at smallest part 5 7/8 Area supported by each stay 31 3/8 Working pressure by rules 192 Material of Front plates at bottom S

Thickness 31/32 Material of Lower back plate S Thickness 29/32 Greatest pitch of stays 14 3/4 x 9 3/4 Working pressure of plate by rules 200

Diameter of tubes 2 1/2 Pitch of tubes 33 1/4 x 3 1/16 Material of tube plates S Thickness: Front 21/32 Back 13/16 Mean pitch of stays 9.44

Pitch across wide water spaces 13 1/2 Working pressures by rules 182 Girders to Chamber tops: Material Iron Depth and thickness of girder at centre 11 x 1 (2) Length as per rule 3.3 Distance apart 8 5/8 Number and pitch of stays in each 3 at 9 1/8

Working pressure by rules 210 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

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. *1100* Description *Vertical Donkey Boiler*

Made at *Glasgow* By whom made *James Jackson & Co. Ltd.* When made *1917* Where fixed *on board*

Working pressure *150 lbs* tested by hydraulic pressure to *200 lbs* Date of test *15/9/17* No. of Certificate *1100* Fire grate area *1.5* Description of Safety *Valves*

Valves *1* No. of Safety Valves *1* Area of each *1.5* Pressure to which they are adjusted *150 lbs* Date of adjustment *15/9/17*

If fitted with easing gear *No* If steam from main boilers can enter the donkey boiler *No* Dia. of donkey boiler *1.5* Length *1.5*

Material of shell plates *Steel* Thickness *1/2"* Range of tensile strength *30 tons* Descrip. of riveting long. seams *Butt*

Dia. of rivet holes *1/2"* Whether punched or drilled *Drilled* Pitch of rivets *2"* Lap of plating *1"* Per centage of strength of joint *100%* Rivets *1/2"* Plates *1/2"*

Working pressure of shell by rules *150 lbs* Thickness of shell crown plates *1/2"* Radius of do. *1.5* No. of stays to do. *1* Dia. of stays *1/2"*

Diameter of furnace Top *1.5* Bottom *1.5* Length of furnace *1.5* Thickness of furnace plates *1/2"* Description of joint *Butt*

Working pressure of furnace by rules *150 lbs* Thickness of furnace crown plates *1/2"* Radius of do. *1.5* Stays by *1*

Diameter of uptake *1.5* Thickness of uptake plates *1/2"* Thickness of water tubes *1/2"* Dates of survey *15/9/17*

SPARE GEAR. State the articles supplied:— *Connecting Rod bolts for top end. bolts for bottom end 2 80 mm bearing bolts 1 set of Coupling bolts 1 set of Feed & Bilge Pump valves 1 set of Piston Rings 1 Propeller shaft a quantity of assorted bolts & nuts Iron of various sizes*

JAMES JACKSON & CO. LTD.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building *15/9/17* During progress of work in shops *15/9/17* During erection on board vessel *15/9/17* Total No. of visits *1*

Is the approved plan of main boiler forwarded herewith *No*

Dates of Examination of principal parts: Cylinders *15/9/17* Slides *15/9/17* Covers *15/9/17* Pistons *15/9/17* Rods *15/9/17*

Connecting rods *15/9/17* Crank shaft *15/9/17* Thrust shaft *15/9/17* Tunnel shafts *15/9/17* Screw shaft *15/9/17* Propeller *15/9/17*

Stern tube *15/9/17* Steam pipes tested *15/9/17* Engine and boiler seatings *15/9/17* Engines holding down bolts *15/9/17*

Completion of pumping arrangements *15/9/17* Boilers fixed *15/9/17* Engines tried under steam *15/9/17*

Main boiler safety valves adjusted *15/9/17* Thickness of adjusting washers *15/9/17*

Material of Crank shaft *Steel* Identification Mark on Do. *LLOYDS* Material of Thrust shaft *Steel* Identification Mark on Do. *LLOYDS*

Material of Tunnel shafts *Steel* Identification Marks on Do. *WGM* Material of Screw shafts *Steel* Identification Marks on Do. *WGM*

Material of Steam Pipes *Steel* Test pressure *150 lbs*

General Remarks (State quality of workmanship, opinions as to class, &c.) *These engines & boiler have been built under special survey in accordance with the approved plans, the workmanship & materials are of good quality. The machinery is eligible in my opinion for the record of L.M.C. 9-17. This machinery is a dupl of No. 466. S/S "Electric Arrow" 25th Sept. No. 36943*

The amount of Entry Fee .. £ *3* : : When applied for, *15/9/17*

Special .. £ *45* : : *10*

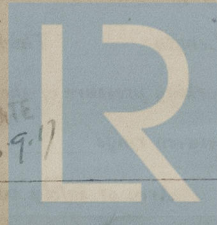
Donkey Boiler Fee .. £ : : When received, *19/9/17*

Travelling Expenses (if any) £ : : *19/9/17*

Committee's Minute *GLASGOW. 25 SEP 1917*

Assigned *+ L.M.C. 9.17.*

W. Gordon Maclellan
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



Lloyd's Register Foundation