

Rpt. 4.

REPORT ON MACHINERY.

No. 15375

Received at London Office 16 JUN 1917

Date of writing Report 11th June 1917 When handed in at Local Office 14/6/17 Port of West Hartlepool

No. in Survey held at West Hartlepool Date, First Survey 17th Oct/16 Last Survey 19th June 1917

Reg. Book. on the steel screw steamer "MAINDY COURT" (Number of Vents 79) Gross 3792 Tons Net 1435

Master J. J. J. J. Built at Sunderland By whom built J. Priestman & Co. Ltd. When built 1917

Engines made at Hartlepool By whom made Richardsons, Westport & Co. Ltd. when made 1917

Boilers made at Hartlepool By whom made Richardsons, Westport & Co. Ltd. when made 1917

Registered Horse Power Owners Mermaid Shipping Co. Ltd. Port belonging to Cardiff

Nom. Horse Power as per Section 28 351 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple Expansion (Inverted) Cylinder No. of Cylinders Three No. of Cranks Three

Dia. of Cylinders 25-41-67 Length of Stroke 45 Revs. per minute 65 Dia. of Screw shaft as per rule 13.85 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 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 4-8 1/2

Dia. of Tunnel shaft as per rule 12.41 Dia. of Crank shaft journals as per rule 13.03 Dia. of Crank pin 13 1/2 Size of Crank webs 8x19 3/4 Dia. of thrust shaft under collars 14 1/2

Dia. of screw 16-9 Pitch of Screw 16-6 No. of Blades four State whether moveable no Total surface 90 sq ft

No. of Feed pumps no Diameter of ditto 3 Stroke 27 Can one be overhauled while the other is at work yes

No. of Bilge pumps no Diameter of ditto 3 3/4 Stroke 27 Can one be overhauled while the other is at work yes

No. of Donkey Engines three Sizes of Pumps General Service 7x7 1/2 inch, auxiliary 4 1/2 x 6 inch No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room three 3 1/2 inch

No. of Bilge Injections six sizes 5 1/2 Connected to condenser, or to circulating pump no 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 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

Dates of examination of completion of fitting of Sea Connections 3-5-17 of Stern Tube 15/5/17 Screw shaft and Propeller 15/5/17

Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from upper platform

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel J. Opencer & Sons Ltd. & Leeds Forge Co. Ltd.

Total Heating Surface of Boilers 5740 sq ft Is Forced Draft fitted no No. and Description of Boilers 3 single ended, Cyl. Multitubular

Working Pressure 180 lb Tested by hydraulic pressure to 360 lb Date of test 8/3/17 No. of Certificate 3453

Can each boiler be worked separately yes Area of fire grate in each boiler 46.9 sq ft No. and Description of Safety Valves to each boiler no direct spring

Area of each valve 5.94 sq in Pressure to which they are adjusted 185 lb Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 30 Mean dia. of boilers 14-3 Length 10-6 Material of shell plates steel

Thickness 1 5/16 Range of tensile strength 28 1/2 to 32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams Lap DR.

long. seams DR Diameter of rivet holes in long. seams 1 3/16 Pitch of rivets 8 1/2 Lap of plates or width of butt straps 1 1/2

Per centages of strength of longitudinal joint rivets 86.4% Working pressure of shell by rules 185 lb Size of manholes in shell 12x16 1/2

Size of compensating ring 4 3/4 x 1 1/2 No. and Description of Furnaces in each boiler three Suspension Material steel Outside diameter 43 3/4

Length of plain part top 9 bottom 7 1/2 Thickness of plates crown 9 bottom 7 1/2 Description of longitudinal joint Weld No. of strengthening rings —

Working pressure of furnaces by the rules 201 1/2 lb Combustion chamber plates: Material steel Thickness: Sides 9/16 Back 9/16 Top 9/16 Bottom 13/16

Pitch of stays to ditto: Sides 4x8 1/4 Back 4x8 3/8 Top 4x8 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 1836 lb

Material of stays steel Diameter at smallest part 1.48 in Area supported by each stay 8 3/8 x 7 Working pressure by rules 202 1/2 lb End plates in steam space: Material steel

Thickness 1 1/8 x 1 3/32 Pitch of stays F. 16 1/2 x 19 1/8 B. 16 x 18 1/8 How are stays secured by nuts Working pressure by rules 182 1/2 lb Material of stays steel

Diameter at smallest part 6.1 in Area supported by each stay 16 x 20 Working pressure by rules 198 1/2 lb Material of Front plates at bottom steel

Thickness 13/16 Material of Lower back plate steel Thickness 13/16 Greatest pitch of stays 13 x 8 3/8 Working pressure of plate by rules 190 lb

Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 x 4 3/8 Material of tube plates steel Thickness: Front 13/16 Back 13/16 Mean pitch of stays 13 1/2 x 8 3/8

Pitch across wide water spaces 14 1/4 Working pressures by rules 212 lb Girders to Chamber tops: Material steel Depth and thickness of girder at centre 7 x 1 3/4 Length as per rule 24 1/2 Distance apart 8 Number and pitch of stays in each no 4 3/8

Working pressure by rules 182 1/2 lb 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: - Two each Top End, Bottom End & Main Bearing Bolts & Nuts, one set of connecting Bolts, one set of feed & one set of valve valves, one set of check valves. Two safety valve springs, propeller & shaft & assorted Bolts nuts pins & brass.

The foregoing is a correct description.

FOR RICHARDSONS, WESTGARTH & CO. LIMITED

J. L. Stanley

Manufacturers

Dates of Survey while building: During progress of work in shops: 1916 Oct 17, 18, Nov 6, 7, 13, 14, 23, Dec 4, 6, 8, 11, 19, 22, 27, 28, 1917 Jan 4, 5, 9, 11, 15, 18, 22, 23, 25, 26, 27, 29, 30, 31; During erection on board vessel: Feb 2, 5, 6, 12, 13, 14, 15, 16, 19, 20, 22, 23, 26, 27, 28, March 1, 6, 8, 9, 12, 13, 15, 19, 26, 27, Apr 4, 10, 11, 20, 21, 23, 25, May 10, 14, 15, 17, 21, 23, 24, 31, June 1, 6, 7, 9 (73+6) Total No. of visits: Is the approved plan of main boiler forwarded herewith? Yes

Dates of Examination of principal parts: Cylinders 12/17, 13/17, Slides 14/17, 15/17, Covers 19/17, Pistons 21/17, 22/17, Rods 23/17, 24/17, Connecting rods 25/17, Crank shaft 26/17, Thrust shaft 27/17, Tunnel shafts 28/17, Screw shaft 29/17, Propeller 30/17, Stern tube 31/17, Steam pipes tested 1/17, Engine and boiler seatings 15/17, Engines holding down bolts 21/17, Completion of pumping arrangements 6/17, Boilers fired 17/17, Engines tried under steam 6/17, Main boiler safety valves adjusted 6/17, Thickness of adjusting washers 13/17, 15/17, 16/17, 18/17, 20/17, 21/17, 22/17, 23/17, 24/17, 25/17, 26/17, 27/17, 28/17, 29/17, 30/17, 31/17, Material of Crank shaft steel Identification Mark on Do. (5889) Material of Thrust shaft steel Identification Mark on Do. (5889) Material of Tunnel shafts iron Identification Marks on Do. (5889) Material of Screw shafts iron Identification Marks on Do. (5889) Material of Steam Pipes Spunwelded iron Test pressure 540 lb

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? no If so, state name of vessel: ---

Exhaust	791
Feed Heater	801
	50th
	27/2/17
	21/4/17

General Remarks (State quality of workmanship, opinions as to class, &c.)
Signature Body tested 50th, ends 400th. Feed Heater Body tested 50th, ends 400th.

The Engines & Boilers of this Vessel have been built under Special Survey the Material & workmanship sound & good. The Boilers & Steam pipes have been tested by Hydraulic pressure in accordance with the Rules. The Machinery worked well at the manouvers & the Safety Valves have been adjusted under steam to their working pressure. Rendering this Vessel eligible in our opinion to have the Notation of *LMC Sp in the Register Book when the Survey is completed as under

To complete Survey. The Main feed pumps to work. Emergency gear to fit to safety valves and the Tunnel to be made watertight. Surveyors Advised 9/6/17. Also the steering Engine gear, & Electric Light to complete work.

Sunderland. Feed pumps tried, safety valve casing gear fitted tunnel made watertight steering engine and electric light fitted. a ^{new} gunmetal branch piece fitted to the main check valve of the centre boiler and another fitted to the donkey check valve of the port boiler. 3 spunwelded iron main steam lines tested to 540 lbs and refitted in vessel as recommended above and in RML letters dated 9/20-6-17

The amount of Entry Fee ... £ 3 : 0 : When applied for, 15/6/17
Special ... £ 34 : 11 :
Donkey Boiler Fee ... £ : : :
Travelling Expenses (if any) £ : : :
When received, 20/7/17

W. Davis & J. Davis
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute TUE 17 JUL 1917
Assigned + L.M.C. 7/17

