

REPORT ON MACHINERY

No. 15300

TUE 3 OCT. 1916

pt. 4.

Received at London Office

28th Sept 1916 When handed in at Local Office 30/9/16 Port of West Hartlepool
 Date, First Survey 15th Oct 1915 Last Survey 26th Sept 1916
 (Number of Vents 92) Gross 5694

To. in Survey held at West Hartlepool
 Reg. Book. on the steel screw steamer WESTWICK
 Tons Net 4257

Master Harrison Built at Sunderland By whom built W. Pickersgill & Co. Ltd. When built 1916

Engines made at Hartlepool By whom made Richardsons, Westgarth & Co. Ltd. when made 1916

Boilers made at Hartlepool By whom made Richardsons, Westgarth & Co. Ltd. when made 1916

Registered Horse Power 452 Owners James Whitall Port belonging to Sunderland

Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

NGINES, &c.—Description of Engines Triple Expansion (inverted cylinder) No. of Cylinders Three No. of Cranks Three

Dia. of Cylinders 26, 43, 72 Length of Stroke 48 Revs. per minute 65 Dia. of Screw shaft 14 3/4 Material of Locust

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 — 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 — Length of stern bush 4-11 3/8

Dia. of Tunnel shaft as per rule 13.65 Dia. of Crank shaft journals as fitted 14 1/2 Dia. of Crank pin 14 1/2 Size of Crank webs 9x22 Dia. of thrust shaft under

collars 14 1/2 Dia. of screw 14 1/2 Pitch of Screw 14 1/2 No. of Blades four State whether moveable no Total surface 96.2

No. of Feed pumps two Diameter of ditto 4 Stroke 24 Can one be overhauled while the other is at work yes

No. of Bile pumps two Diameter of ditto 4 Stroke 24 Can one be overhauled while the other is at work yes

No. of Deakey Engines Three Sizes of Pumps 8x5x8 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room two 3/2 In Holds, &c. Each Hold two 3/2

No. of Bile Injections one Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes 3/2

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 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

Date of examination of completion of fitting of Sea Connections 10-8-16 of Stern Tube 17/8/16 Screw shaft and Propeller 17/8/16

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

BOLERS, &c.—(Letter for record S) Manufacturers of Steel John D. & Co. (Ld.) & Sons

Total Heating Surface of Boilers 7810 Is Forced Draft fitted no No. and Description of Boilers Three single ended Cyl. & Mult.

Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 23/2/16 No. of Certificate 3421

Can each boiler be worked separately yes Area of fire grate in each boiler 58 No. and Description of Safety Valves to

each boiler no direct spring Area of each valve 7.04 Pressure to which they are adjusted 185 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 36 Mean dia. of boilers 16-3 3/8 Length 11-0 Material of shell plates steel

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

long. seams DBS-TR Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 9 Lap of plates or width of butt straps 18 3/4

Per centages of strength of longitudinal joint 85.4 Working pressure of shell by rules 182.5 Size of manhole in shell End plate 12x16

Size of compensating ring flanged No. and Description of Furnaces in each boiler one expansion (3) Material steel Outside diameter 50 3/4

Length of plain part top Thickness of plates bottom 3/8 Description of longitudinal joint Weld No. of strengthening rings —

Working pressure of furnace by the rules 198.5 Combustion chamber plates: Material steel Thickness: Sides 19 Back 19 Top 19 Bottom 15

Pitch of stays to ditto: Sides 8x8 Back 8x8 Top 8x8 If stays are fitted with nuts or riveted heads nut Working pressure by rules 180 End plates in steam space:

Material of stays steel Diameter at smallest part 1 1/2 Area supported by each stay 8x8 Working pressure by rules 180 Material of stays steel

Material steel Thickness 1 1/2 Pitch of stays 19 1/4 How are stays secured by nuts Working pressure by rules 180 Material of Front plates at bottom steel

Diameter at smallest part 1 1/2 Area supported by each stay 16x16 Working pressure by rules 180 Working pressure of plate by rules 180

Thickness 1 1/2 Material of Lower back plate steel Thickness 1 1/2 Greatest pitch of stays 13 3/8 Working pressure of plate by rules 180

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

Pitch across wide water spaces 14 1/2 Working pressures by rules 182 1/2 Girders to Chamber tops: Material steel Depth and

thickness of girder at centre 8 1/4 x 1 3/4 Length as per rule 32.4 Distance apart 8 3/16 Number and pitch of stays in each three 8

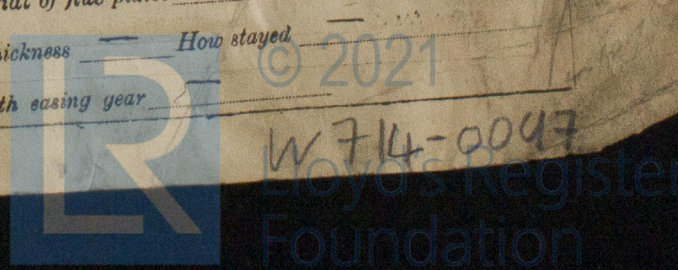
Working pressure by rules 180.5 Superheater or Steam chest; how connected to boiler — Can the superheater be shut off and the boiler worked

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 —



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 coupling bolts. one set flange valves. Spacers for independent feed pumps.
propeller & propeller shaft & mounted bolts into & on.
also top End bush, Bottom End bush, Air & Circulating pump valves &
feed & Ballast Draining valves, & Condenser tubes & 3 Expansion Springs.

FOR RICHARDSONS, WESTGARTH & Co., LIMITED

Leipzig

ASSISTANT GENERAL MANAGER

Manufacturer.

Dates of Survey while building	{ During progress of work in shops -- { During erection on board vessel -- { Total No. of visits	1915. Oct. 15, 27, 29. Nov. 2, 4, 6, 8, 11, 12, 15, 16, 18, 19, 22, 23, 24, 25, 26, 29, 30. Dec. 1, 2, 3, 6, 7, 8, 9, 10, 13, 14, 15, 16, 20, 21, 22, 23, 28, 30. 1916. Jan. 4, 5, 7, 10, 11, 14, 17, 18, 19, 25, 31. Feb. 4, 7, 8, 11, 23, 25. March 7, 10, 13, 15. April 1, 10, May 10. June 5, 7, 8, 9, 13, 14, 20, 22, 27, 28. July 13, 20, 21, 24, 25, 27, 31. Aug. 7, 16, 17, 18, 21, 23, 30. Sep. 1, 13, 14, 15, 25, 26.
		11th Aug. 10 (EL LIGHT Oct. 13, Nov. 17)
		Is the approved plan of main boiler forwarded herewith
		(92 + 1)

Dates of Examination of principal parts—Cylinders $\frac{27}{10}/16$ to $\frac{31}{10}/16$ Slides $\frac{25}{10}/16$ to $\frac{27}{10}/16$ Covers $\frac{27}{10}/16$ to $\frac{27}{10}/16$ Pistons $\frac{4}{10}/16$ to $\frac{4}{10}/16$ Rods $\frac{11}{10}/16$ to $\frac{21}{10}/16$
 Connecting rods $\frac{24}{10}/16$ to $\frac{20}{10}/16$ Crank shaft $\frac{11}{10}/16$ to $\frac{24}{10}/16$ Thrust shaft $\frac{28}{10}/16$ to $\frac{4}{10}/16$ Tunnel shafts $\frac{28}{10}/16$ to $\frac{4}{10}/16$ Screw shaft $\frac{7}{10}/16$ to $\frac{27}{10}/16$ Propeller $\frac{21}{10}/16$ to $\frac{4}{10}/16$
 Stern tube $\frac{31}{10}/16$ Steam pipes tested $\frac{8}{10}/16$ Engine and boiler seatings $\frac{30}{8}/16$ Engines holding down bolts $\frac{30}{8}/16$
 Completion of pumping arrangements $\frac{26}{9}/16$ Boilers fixed $\frac{25}{9}/16$ Engines tried under steam $\frac{26}{9}/16$
 Main boiler safety valves adjusted $\frac{26}{9}/16$ Thickness of adjusting washers $\frac{1}{32}$ $\frac{1}{16}$ $\frac{3}{16}$ $\frac{1}{2}$ $\frac{3}{4}$
 Material of Crank shaft *steel* Identification Mark on Do. $\frac{5781}{19/5/16}$ Material of Thrust shaft *steel* Identification Mark on Do. $\frac{1781}{19/6/16}$
 Material of Tunnel shafts *iron* Identification Marks on Do. $\frac{5781}{19/16}$ Material of Screw shafts *iron* Identification Marks on Do. $\frac{5781}{7/16}$ $\frac{5781}{8/8/16}$
 Material of Steam Pipes *mit iron* Test pressure $540 \frac{lb}{sq. in.}$ ✓

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 no If so, state name of vessel.

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

Evaporator Body tent 50 th , coils 400 th	9 th 50 th 19/5/16	Exhaust feed Heater Body tent 50 th tubes 400 th (sunk)	697 th 50 th 9/5/16
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The Engines & Boilers of this Vessel have been built under Special
Survey the Material & Workmanship Sound & Good. The Steam Pipes
& the Boilers have been tested by Hydraulic Pressure in accordance
with the Rules, the whole of the Machinery worked satisfactorily
at the morning & the Safety Valves have been regulated under
steam to their working pressure & Exhaust Pipe fitted, rendering
this Vessel Eligible in ~~all~~ ^{every} respect to have the Notation
* L M C 9/15 180 th in the Register Book

It is submitted that
this vessel is eligible for
THE RECORD + LMC 9 16

The amount of Entry Fee ...	£ 3 : 0 :	When applied for,
Special	£ 42 : 12 :	2/10/16
Doukey Boiler Fee	£ .. : .. :	When received at
Travelling Expenses (if any) £	.. : .. :	17/11/16

Engineer-Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute TUE. 21 NOV. 1916

Assigned

+ Lm 6.9.16

Lloyd's Register
Foundation