

REPORT ON MACHINERY

No. 70512

FRI. 14 DEC. 1917

Date of writing Report 7th Nov. 1917 at Local Office

Port of

NEWCASTLE-ON-TYNE

No. in Survey held at Newcastle
Reg. Book.

Date, First Survey 12th Mar. 1917 Last Survey 22nd Nov. 1917

on the T.S.S. P. 4. 2.

(Number of Vents 57) Gross 2678
Net 1105

Master Built at Newcastle By whom built Sir W. G. Armstrong Whitworth & Co. When built 1917

Engines made at Newcastle By whom made Wallsend Slipway & Eng. Co. No. 795 when made 1917

Boilers made at do By whom made Palmers' Co. when made 1917

Registered Horse Power Owners The British Government Port belonging to

Nom. Horse Power as per Section 28 403 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

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

Dia. of Cylinders 18" - 29" - 47" Length of Stroke 27" Revs. per minute 165 Dia. of Screw shaft as per rule 9.4" Material of screw shaft as fitted 9.4" Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube no liner Is the after end of the liner made water tight in the propeller boss

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 If two liners are fitted, is the shaft lapped or protected between the liners

Dia. of Tunnel shaft as per rule 8.38" Dia. of Crank shaft journals as per rule 8.8" Dia. of Crank pin 9" Size of Crank webs 14 1/2 x 1 1/2 Dia. of thrust shaft under collars 9" Dia. of screw 9" Pitch of Screw 10" 9" No. of Blades 4 State whether moveable no Total surface 36.6

No. of Feed pumps 2 Diameters of ditto 10 1/2 x 8 Stroke 21" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameters of ditto 7 x 7 Stroke 8" Can one be overhauled while the other is at work yes

No. of Donkey Engines 2 Sizes of Pumps 10 x 14 x 15 7 x 4 1/2 x 8 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Two 3 1/2" & two 3" In Holds, &c. No. 1. One 3 1/2", No. 2. One 3 1/2", No. 3. One 3 1/2"

No. of Bilge Injections 1 sizes 9" Connected to condenser or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes 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 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 Both

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 11. 9. 17 of Stern Tube 11. 9. 17 Screw shaft and Propeller 11. 9. 17

Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record) Manufacturers of Steel See Boiler Report

Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers

Working Pressure Tested by hydraulic pressure to Date of test No. of Certificate

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

each boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates

Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Per centages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell

Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings

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

Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each

Working pressure by rules 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 top end, two bottom end, & two main-bearing bolts & nuts, a set of coupling bolts, a set of feed & bilge pump valves, a quantity of assorted bolts nuts & washers, six junk ring bolts, four check valve lids.

The foregoing is a correct description,

FOR THE WALLSEND SLIPWAY & ENGINEERING CO. LIMITED.

Manufacturer.

DIRECTOR

Dates of Survey while building
During progress of work in shops - - - 1917
During erection on board vessel - - - Mar. 12. 16. 20. 26. 28. 30. Apr. 2. 4. 11. 13. 16. 23. 24. 26. 30. May. 2. 4. 7. 8. 11. 14. 15. 17. 18. 21. 29.
Total No. of visits 57

Is the approved plan of main boiler forwarded herewith no
forwarded with previous report
" donkey "

Dates of Examination of principal parts—Cylinders 19-6-17 Slides 21-5-17 Covers 26-4-17 Pistons 17-5-17 Rods 17-5-17
Connecting rods 17-5-17 Crank shafts 29-5-17 Thrust shaft 4-5-17 Tunnel shafts 3-9-17 Screw shafts 3-7-17 Propellers 16-7-17
Stern tube 5-1-8-17 Steam pipes tested 8-10-17 Engines and boiler seatings 11-9-17 Engines holding down bolts 4-10-17
Completion of pumping arrangements 1-11-17 Boilers fixed 4-10-17 Engines tried under steam 1-11-17
Main boiler safety valves adjusted 1-11-17 Thickness of adjusting washers P.F.P. $P\frac{3}{8}S\frac{11}{32}$ S.F.B. $P\frac{3}{8}S\frac{3}{8}$ P.A.B. $P\frac{7}{16}S\frac{13}{32}$ S.A.B. $P\frac{3}{8}S\frac{11}{32}$
Material of Crank shafts Steel Identification Mark on Do. L.H. 5-17 Material of Thrust shafts Steel Identification Mark on Do. L.H. 5-17
Material of Tunnel shafts Steel Identification Marks on Do. L.H. 9-17 Material of Screw shafts Steel Identification Marks on Do. L.H. 7-17
Material of Steam Pipes Iron ✓ Test pressure 540 lbs

Is an installation fitted for burning oil fuel yes ✓ Is the flash point of the oil to be used over 150°F. yes ✓

Have the requirements of Section 49 of the Rules been complied with yes ✓

Is this machinery duplicate of a previous case yes ✓ If so, state name of vessel L.H. 1.

General Remarks (State quality of workmanship, opinions as to class, &c. The engines & boilers of this vessel have been constructed under special survey & the materials and workmanship are found & good. The engines have been tried under steam, & the boiler safety valves adjusted at the working pressure. The machinery is now in good & safe working condition & eligible in my opinion to have the notation of +LMC 11-17. Fitted for burning oil fuel, flash point above 150°F. A report on the electric installation will be forwarded when received from the Electricians.

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 11-17. F.D.
Fitted for oil 11-17. F.P. above 150°F.

The amount of Entry Fee ... £ 3 : 0 : 0
Special ... £ 40 : 3 : 0
Donkey Boiler Fee ... £ ✓
Travelling Expenses (if any) £ ✓

When applied for,
13 DEC 1917

Then received,
24-12-17

Committee's Minute

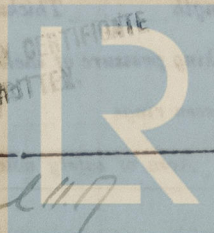
Assigned

TUE. 18 DEC. 1917

+ LMC 11-17

F.D. Fitted for oil fuel 11-17
F.P. above 150°F

Thomas Field
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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Foundation