

## REPORT ON MACHINERY.

No. 27800

Received at London Office

Date of writing Report 27<sup>th</sup> July 1914 When handed in at Local Office 5-8 1914 Port of Hull.

No. in Survey held at Hull Date, First Survey 15-1-14 Last Survey 24-7-1914

Reg. Book Sup. on the Steel Sec K "LORD DEANMAN" (Number of Vols 12)

Master Telby Built at By whom built Bochrae & Co Ltd Tons { Gross 309 Net 126

Engines made at Hull By whom made Amos & Smith Ltd When built 1914

Boilers made at Hull By whom made Amos & Smith Ltd when made 1914

Registered Horse Power 90 Owners Yorkshire Stevedoring Co Ltd Port belonging to Hull

Nom. Horse Power as per Section 28 90 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

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

Dia. of Cylinders 13" 22 3/4" 37" Length of Stroke 26 Revs. per minute 110 Dia. of Screw shaft 7.94 as per rule 7.94 as fitted 8.4 Material of 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 Yes 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 Yes Length of stern bush 3'-0"

Dia. of Tunnel shaft 7.02 as per rule 7.02 as fitted 7.2 Dia. of Crank shaft journals 7.27 as per rule 7.27 as fitted 7.2 Dia. of Crank pin 7 1/2 Size of Crank webs 14 3/4 x 4 1/4 of thrust shaft under collars 7 1/2 Dia. of screw 9.4 Pitch of Screw 11'-6" No. of Blades 4 State whether moveable No Total surface 34 1/2

No. of Feed pumps 1 Diameter of ditto 2 7/8 Stroke 12 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 1 Diameter of ditto 2 7/8 Stroke 12 Can one be overhauled while the other is at work Yes

No. of Donkey Engines One Sizes of Pumps 6 x 4 1/4 x 6 duplex No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room Two - 2" one forward one aft. In Holds, &c. 3-2" Fishroom Fore peak.

In Engine Room Slushwell 2" ejector from all bilges.

No. of Bilge Injections 1 sizes 3 Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & sized "ejector"

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 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 Hold suction How are they protected Wood casing

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 22.5.14 of Stern Tube 22.5.14 Screw shaft and Propeller 22.5.14

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

BOILERS, &c.—(Letter for record S Manufacturers of Steel Phoenix Co of Horde

Total Heating Surface of Boilers 1511 Is Forced Draft fitted No No. and Description of Boilers The single ended

Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 3.7.14 No. of Certificate 3003

Can each boiler be worked separately Yes Area of fire grate in each boiler 48 1/2 No. and Description of Safety Valves to each boiler 2 Spring Area of each valve 4.9 Pressure to which they are adjusted 205 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 7" Ext Mean dia. of boilers 13'-11 3/4" Length 10'-7 2/3" Material of shell plates S

Thickness 1 3/16 Range of tensile strength 29-33 Are the shell plates welded or flanged Yes Descrip. of riveting: cir. seams 10 R L

long. seams 10 B S Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 3/4 Lap of plates or width of butt straps 17 3/4

Per centages of strength of longitudinal joint 87.83 Working pressure of shell by rules 200 Size of manhole in shell 16" x 12

Size of compensating ring 40 x 30 x 1 3/16 No. and Description of Furnaces in each boiler 3 plain Material S Outside diameter 3' 4 1/8

Length of plain part 6' 6" Thickness of plates 13 Description of longitudinal joint Welded No. of strengthening rings Yes

Working pressure of furnace by the rules 206 Combustion chamber plates: Material S Thickness: Sides 1 1/16 Back 2 3/32 Top 1 1/16 Bottom 1 3/16

Pitch of stays to ditto: Sides 9 3/4 x 7 1/4 Back 9 1/8 x 8 1/2 Top 7 1/4 x 9 1/2 stays are fitted with nuts or riveted heads Nuts Working pressure by rules 210

Material of stays S Diameter at smallest part 2.06 Area supported by each stay 81.81 Working pressure by rules 217 End plates in steam space: Material S Thickness 1 1/32 Pitch of stays 17 1/4 x 17 1/4 How are stays secured By nuts Working pressure by rules 201 Material of stays S

Diameter at smallest part 7.24 Area supported by each stay 315.06 Working pressure by rules 238 Material of Front plates at bottom S

Thickness 1" Material of Lower back plate S Thickness 2 3/32 Greatest pitch of stays 13 3/4 x 9 3/8 Working pressure of plate by rules 217

Diameter of tubes 3 1/2 Pitch of tubes 5 x 4 3/4 Material of tube plates S Thickness: Front 1" Back 2 1/32 Mean pitch of stays 12 1/2 x 4 3/4

Pitch across wide water spaces 13 3/4 Working pressures by rules 203 Girders to Chamber tops: Material S Depth and thickness of girder at centre 9 1/4 x 2 Length as per rule 36" Distance apart 9 1/2 Number and pitch of stays in each 3 at 7 3/4

Working pressure by rules 209 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?

No.

SPARE GEAR.

State the articles supplied:-

Two each of bottom end connecting rod bolts & nuts, One set of coupling bolts & nuts, Two main bearing bolts & nuts, One set each for & bidge pump valves, Iron of various sizes, a quantity of assorted bolts & nuts etc.

The foregoing is a correct description,

FOR AMOS &amp; SMITH LTD.

J. P. Rackebury

Manufacturer.

Dates of Survey while building

During progress of work in shops - - -  
During erection on board vessel - - -  
Total No. of visits 22

1914: Jan 15, Mar 9, 17, 23, Apr 1, 27, May 15, 21, 22, 28, Jun 12, 19, 23, 29, Jul 2, 3, 4, 7.

July 13, 16, 18, 24.

Is the approved plan of main boiler forwarded herewith R/L 27792

Dates of Examination of principal parts - Cylinders 12.6.14, Slides 12.6.14, Covers 12.6.14, Pistons 12.6.14, Rods 29.6.14, Connecting rods 29.6.14, Crank shaft 29.6.14, Thrust shaft 29.6.14, Tunnel shafts ✓, Screw shaft 15.5.14, Propeller 15.5.14, Stern tube 15.5.14, Steam pipes tested 16.7.14, Engine and boiler seatings 22.5.14, Engines holding down bolts 13.7.14, Completion of pumping arrangements 24.7.14, Boilers fixed 13.7.14, Engines tried under steam 18.7.14, Main boiler safety valves adjusted 18.7.14, Thickness of adjusting washers FV  $\frac{1}{16}$ " AV  $\frac{1}{32}$ ".

Material of Crank shaft S. Identification Mark on Do. 1227, Material of Thrust shaft S. Identification Mark on Do. 1227, Material of Tunnel shafts ✓ Identification Marks on Do. ✓, Material of Screw shafts S. Identification Marks on Do. 1227, Material of Steam Pipes Copper Solid drawn, Test pressure 400 lbs. hyd. press.

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. yes. If so, state name of vessel S.T. "Thomas Stratten."

General Remarks (State quality of workmanship, opinions as to class, &c.) The engines & boiler of this vessel have been constructed under special survey in accordance with the Rules. The materials and workmanship are sound & good. The Boiler tested by hydraulic pressure and with the engines secured on board & tested under steam they are now in good order & safe working condition and respectfully submitted as being eligible in my opinion to be classed with the notation of +LMC 7.14 in the Register books.

It is submitted that  
this vessel is eligible for  
THE RECORD. + LMC 7.14

The amount of Entry Fee ... £ / :

Special

Donkey Boiler Fee

Travelling Expenses (if any) £

When applied for,

When received,

Engineer Surveyor to Lloyd's Register of British &amp; Foreign Shipping.

Committee's Minute

TUE. AUG. 11. 1914

Assigned

+ LMC 7.14



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