

REPORT ON MACHINERY.

No. 27792

Received at London Office

THU. AUG. -6. 1914

Date of writing Report 17th July 1914 When handed in at Local Office 21st July 1914 Port of 15-1-14 Last Survey 17.7. 1914.
No. in Survey held at 636 Reg. Book. on the steam trawler "THOMAS STRATTEN." 2473 (Number of Visits 19) Gross 309 Tons Net 126 Tons
Master Selby Built at Selby By whom built Cochrane & Sons Ltd When built 1914.
Engines made at Hull. By whom made Amos & Smith Ltd. when made 1914.
Boilers made at Hull. By whom made Amos & Smith Ltd. when made 1914.
Registered Horse Power Pickering & Haldanes Str. Trawling Port belonging to Hull.
Nom. Horse Power as per Section 28 90. Is Refrigerating Machinery fitted for cargo purposes ☒ Is Electric Light fitted no.

ENGINES, &c.—Description of Engines Triple Expansion. No. of Cylinders 3. No. of Cranks 3.
Dia. of Cylinders 13"-22 $\frac{3}{4}$ "-37" Length of Stroke 26 Rets. per minute 7.94 as per rule 7.94 Material of S. screw shaft
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 ☒ If two
liners are fitted, is the shaft lapped or protected between the liners ☒ Length of stern bush 3'0"
Dia. of Tunnel shaft 7.02" as per rule 7.27 Dia. of Crank shaft journals 7 $\frac{1}{2}$ " as per rule 7 $\frac{1}{2}$ " Dia. of Crank pin 7 $\frac{1}{2}$ " Size of Crank web 4 $\frac{1}{2}$ x4 $\frac{1}{2}$ " of thrust shaft under
collars 7 $\frac{1}{2}$ " Dia. of screw 9'-9" Pitch of Screw 11'-0" No. of Blades 4 State whether moveable no. Total surface 34 $\frac{1}{2}$ "
No. of Feed pumps 1. Diameter of ditto 2 $\frac{7}{8}$ " Stroke 12" Can one be overhauled while the other is at work ☒
No. of Bilge pumps 1. Diameter of ditto 2 $\frac{7}{8}$ " Stroke 12" Can one be overhauled while the other is at work ☒
No. of Donkey Engines One. Sizes of Pumps 6"x4 $\frac{1}{4}$ "x6 duplex No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room Two 2" One for d. one aft. In Holds, &c. Three 2" Fishroom Forepeak.
x Shushwell. 2" ejector from all bilges.
No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 2" 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 sections. How are they protected Hood Casings.
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 7.5.14. of Stern Tube 7.5.14. Screw shaft and Propeller 7.5.14.
Is the Screw Shaft Tunnel watertight ☒ Is it fitted with a watertight door ☒ worked from Phoenix Co of Harde.

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel Phoenix Co of Harde.
Total Heating Surface of Boilers 1511 Is Forced Draft fitted no. No. and Description of Boilers One single-ended.
Working Pressure 200lbs. Tested by hydraulic pressure to 400lbs. Date of test 23.6.14. No. of Certificate 2099.
Can each boiler be worked separately ☒ Area of fire grate in each boiler 48 $\frac{1}{2}$ " 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 $\frac{3}{8}$ " Length 10'7 $\frac{3}{4}$ " Material of shell plates S.
Thickness 1 $\frac{3}{16}$ " Range of tensile strength 29-33. Are the shell plates welded or flanged ☒ Descrip. of riveting: cir. seams DR. S.
long. seams DR. S. Spun Diameter of rivet holes in long. seams 1 $\frac{1}{4}$ " Pitch of rivets 8 $\frac{3}{4}$ " Lap of plates or width of butt straps 17 $\frac{1}{4}$ "
Per centages of strength of longitudinal joint 85.71. Working pressure of shell by rules 200. Size of manhole in shell 16x12.
Size of compensating ring 40x30x1 $\frac{3}{16}$ " No. and Description of Furnaces in each boiler 3 plain. Material S. Outside diameter 3'-4 $\frac{1}{8}$ "
Length of plain part 6'-6" Thickness of plates 13" Description of longitudinal joint welded. No. of strengthening rings 13."
Working pressure of furnace by the rules 206. Combustion chamber plates: Material S. Thickness: Sides 1 $\frac{1}{16}$ " Back 23" Top 1 $\frac{1}{16}$ " Bottom 1 $\frac{1}{16}$ "
Pitch of stays to ditto: Side 9 $\frac{3}{4}$ x7 $\frac{3}{4}$ " Back 9 $\frac{3}{8}$ x8 $\frac{1}{2}$ " Top 7 $\frac{1}{4}$ x9 $\frac{1}{2}$ " If stays are fitted with nuts or riveted heads nuts. Working pressure by rules 210.
Material of stays S. Diameter at smallest part 2.39 Area supported by each stay 81.81" Working pressure by rules 217. End plates in steam space: S.
Material S. Thickness 1 $\frac{1}{32}$ " Pitch of stays 7 $\frac{1}{4}$ x17 $\frac{1}{4}$ " How are stays secured DR. S. W. Working pressure by rules 201. Material of stays S.
Diameter at smallest part 7.24 Area supported by each stay 315.0625" Working pressure by rules 238. Material of Front plates at bottom S.
Thickness 1" Material of Lower back plate S. Thickness 29 Greatest pitch of stays 13 $\frac{3}{4}$ x9 $\frac{1}{8}$ " Working pressure of plate by rules 217.
Diameter of tubes 3 $\frac{1}{2}$ " Pitch of tubes 5'x4 $\frac{3}{4}$ " Material of tube plates S. Thickness: Front 1" Back 32 Mean pitch of stays 12x4 $\frac{1}{4}$ "
Pitch across wide water spaces 13 $\frac{3}{4}$ " Working pressures by rules 203. Girders to Chamber tops: Material S. Depth and
thickness of girder at centre 9 $\frac{3}{4}$ x2 Length as per rule 36" Distance apart 9 $\frac{1}{2}$ " Number and pitch of stays in each 3 at 7 $\frac{3}{4}$ "
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 Report also sent on the Hull of the Ship? yes.

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— *Two each top and bottom end connecting rod half nuts, one set of coupling bolts and nuts, one set each feed & bilge pump valves, iron of various sizes, a quantity of assorted bolts nuts etc. Two main bearing bolts nuts.*

The foregoing is a correct description **FOR AMOS & SMITH LTD.**

S. F. Robinson
Secretary Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1914: Jan 15 Mar 9. 17. 23. April 1. 27. May 21. 28. Jan 9. 12. 16. 19. 23. 29
During erection on board vessel - - - Jul 7. 9. 13. 15. 17.
Total No. of visits 19

Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders *21.5.14* Slides *21.5.14* Covers *9.6.14* Pistons *9.6.14* Rods *12.6.14*
Connecting rods *12.6.14* Crank shaft *16.6.14* Thrust shaft *12.6.14* Tunnel shafts ✓ Screw shaft *1.4.14* Propeller *1.4.14*
Stern tube *1.4.14* Steam pipes tested *7.7.14* Engine and boiler seatings *7.5.14* Engines holding down bolts *7.7.14*
Completion of pumping arrangements *13.7.14* Boilers fixed *7.7.14* Engines tried under steam *9.7.14*
Main boiler safety valves adjusted *9.7.14* Thickness of adjusting washers *AV 32" FV 32"*

Material of Crank shaft *S.* Identification Mark on Do. *1222* Material of Thrust shaft *S.* Identification Mark on Do. *1222*
Material of Tunnel shafts Identification Marks on Do. Material of Screw shaft *S.* Identification Marks on Do. *1222*

Material of Steam Pipes *Copper Solid drawn* Test pressure *400lbs. hyd. pressure*
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 *"J.R. Ferus"*

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 and tested under steam they are now in good order and 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 book.*

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

S.F.
6.8.14

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The amount of Entry Fee ... £ 1 : : When applied for, Special ... £ 13 : 10 : 0 5/8 1914
Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) £ 2 : 9 31.8.14

J. G. MacKillop
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute TUE. AUG. 11. 1914
Assigned + LMC 7.14

