

REPORT ON MACHINERY.

No. 31980.

WED. OCT. 30. 1912.

Received at London Office

Date of writing Report 10 When handed in at Local Office 25. 10. 12 Port of Glasgow

No. in Survey held at Coathridge Date, First Survey 29. 4. 12 Last Survey 8. 10. 1912.

Reg. Book. on the L.S. Loch Morar " (Number of Visits 19.)

Master J. B. Booth Built at Aberdeen By whom built J. Duthie & Co. (380) Tons Gross 228.14 Net 86.48

Engines made at Coathridge By whom made W. & G. Ridgerwood (389) when made 1912

Boilers made at Port-Glasgow By whom made Glasgow Shipbuilding & Eng. Co. (604) when made 1912

Registered Horse Power 71. Owners United Steam Fishing Co. of Aberdeen Ltd. Port belonging to Aberdeen.

Nom. Horse Power as per Section 28 71 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No.

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 12" 20" 34" Length of Stroke 23" Revs. per minute 118. Dia. of Screw shaft as per rule 6.87" 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 — If the liner is in more than one length are the joints burned length 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 2'-9"

Dia. of Tunnel shaft as per rule 6.4" Dia. of Crank shaft journals as per rule 6.4" Dia. of Crank pin 6 3/4" Size of Crank webs 24 1/2" Dia. of thrust shaft under collars 6 1/2" Dia. of screw 8'-6" Pitch of Screw 11'-3" No. of Blades 4 State whether moveable No Total surface 31.6

No. of Feed pumps 2 Diameter of ditto 2 1/2" Stroke 11 1/2" Can one be overhauled while the other is at work —

No. of Bilge pumps 2 Diameter of ditto 2 1/2" Stroke 11 1/2" Can one be overhauled while the other is at work —

No. of Donkey Engines 2 Sizes of Pumps 5 1/2", 3 1/2" & 5" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Two of 2' In Holds, &c. Fishhold & slushwell, one each 2'.

Also ejector, drawing from all parts, and with separate suction to engine room 2'

No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size Yes 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 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 — Sole heat & F.W. tank. How are they protected — Strong 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 — 10. 10. 12. of Stern Tube — 8. 10. 12. Screw shaft and Propeller — 10. 10. 12.

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

OILERS, &c.—(Letter for record S. Manufacturers of Steel)

Total Heating Surface of Boilers 1250 sq ft Is Forced Draft fitted No No. and Description of Boilers One, cyl mult 3 Single.

Working Pressure 180 lbs. Tested by hydraulic pressure to 360 Date of test 21. 10. 12. No. of Certificate 1049.

Can each boiler be worked separately — Area of fire grate in each boiler 48 sq ft No. and Description of Safety Valves to each boiler 2: direct spring Area of each valve 5.94 sq in Pressure to which they are adjusted 185 lbs. Are they fitted with easing gear Yes.

Smallest distance between boilers or uptakes and bunkers or woodwork about 4' Mean dia. of boilers 12' 6" Length 10' 3" Material of shell plates

ft. 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

Rpt. about 1. 11. 12.

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VERTICAL DONKEY BOILER—Manufacturers of Steel

No. Description
 Made at By whom made When made Where fixed
 Working pressure tested by hydraulic pressure to Date of test No. of Certificate Fire grate area Description of Safety
 Valves No. of Safety Valves Area of each Pressure to which they are adjusted Date of adjustment
 If fitted with casing gear If steam from main boilers can enter the donkey boiler Dia. of donkey boiler Length
 Material of shell plates Thickness Range of tensile strength Descrip. of riveting long seams Rivets
 Dia. of rivet holes Whether punched or drilled Pitch of rivets Lap of plating Per centage of strength of joint Plates
 Working pressure of shell by rules Thickness of shell crown plates Radius of do. No. of stays to do. Dia. of stays
 Diameter of furnace Top Bottom Length of furnace Thickness of furnace plates Description of joint
 Working pressure of furnace by rules Thickness of furnace crown plates Radius of do. Stayed by
 Diameter of uptake Thickness of uptake plates Thickness of water tubes Dates of survey

SPARE GEAR. State the articles supplied:—Two top & 2 bottom end bolts & nuts; 2 main bearing & 1 set coupling bolts & nuts; 1 set each, Air, Circulating, Feed & Bilge pump valves; 1 main, & 1 donkey check valve; 1 safety valve spring; bolts & nuts assorted, and iron of various sizes.

The foregoing is a correct description,

For W. Y. Y. Lidgerwood Manufacturer. R. Sneddon

Dates of Survey while building During progress of work in shops -- 1912. April 29. May 7. 17. 22. 28. June 12. 24. 28. July 5. 28. 30. Aug. 9. 20. 26. During erection on board vessel --- Sept. 4. 17. 25. Oct. 2. 8. Aberdeen Oct. 8. 10. 11. 16. 18. 23. 28. Nov. 4. 6. 9. (10)
 Total No. of visits 19. Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 24/6/12 Slides 24/6/12 Covers 24/6/12 Pistons 20/8/12 Rods 20/8/12
 Connecting rods 20/8/12 Crank shaft 30/7/12 Thrust shaft 17/9/12 Tunnel shafts 17/9/12 Screw shaft 3/10/12 Propeller 3/10/12
 Stern tube 3/10/12 Steam pipes tested 4. 11. 12 Engine and boiler seatings 10. 10. 12 Engines holding down bolts 18. 10. 12
 Completion of pumping arrangements 23. 10. 12. Boilers fixed 4. 11. 12 Engines tried under steam 6. 11. 12.
 Main boiler safety valves adjusted 9. 11. 12 Thickness of adjusting washers Port 5" Starboard 4"
 Material of Crank shaft Steel Identification Mark on Do. 5468 27/9/12 Material of Thrust shaft Steel Identification Mark on Do. 5468 27/9/12
 Material of Tunnel shafts Steel Identification Marks on Do. 5468 27/9/12 Material of Screw shafts Steel Identification Marks on Do. 5468 27/9/12
 Material of Steam Pipes Copper solid drawn 3 1/2" bore. No. 4. B.W.S. Test pressure 360 lbs per sq inch.

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

These engines have been built under special survey the materials and workmanship are of good description, they have now been forwarded to Aberdeen when they are to be fitted on board the steam trawler "Loch Morar".
 These engines, together with the boiler (Greenock reports No. 16349) have now been properly fitted on board the above mentioned vessel, tried under steam at moorings, with satisfactory results, and are now in good looking order, and in my opinion entitled to the record.
 * L.M.C. 11. 12. in the Register Book.

Ridley J. Towell.

It is submitted that this vessel is eligible for THE RECORD + LMC 11. 12.

The amount of Entry Fee £ 1 : 0 : 0 When applied for, 28/10/12
 Special Donkey Boiler Fee £ 10 : 13 : 0 When received, 10/11/12
 Travelling Expenses (if any) £ : : : 9. 12. 12

Committee's Minute GLASGOW 29 OCT. 1912
 Assigned Transmit to London

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

FRI. NOV. 15. 1912

+ L.M.C. 11. 12

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