

REPORT ON MACHINERY.

No. 10508

Date of writing Report 3. 4. 1911 When handed in at Local Office 3. 4. 1911 Port of Aberdeen
 No. in Survey held at Aberdeen Date, First Survey 4. 11. 10 Last Survey 1. 4. 1911
 Reg. Book. on the S.S. "ANN FORD MELVILLE" (Number of Visits 36)
 Master Wm. Robt. George. Built at Aberdeen By whom built A. Hall & Co. Ld.
 Engines made at Aberdeen By whom made A. Hall & Co. Ld.
 Boilers made at do. By whom made do do do when made 1911.
 Registered Horse Power 66. Owners James Sangster Melville. Port belonging to Aberdeen.
 Nom. Horse Power as per Section 28 66. Is Refrigerating Machinery fitted for cargo purposes no. Is Electric Light fitted no.

Tons { Gross 211.52
 Net 80.48
 When built 1911.

ENGINES, &c.—Description of Engines Triple expansion. No. of Cylinders 3. No. of Cranks 3.
 Dia. of Cylinders 12", 20", 33" Length of Stroke 23" Revs. per minute 110. Dia. of Screw shaft as per rule 6. 1/2" Material of screw shaft Scrap 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 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.
 Dia. of Tunnel shaft as per rule 6. 1/2" Dia. of Crank shaft journals as per rule 6. 1/2" Dia. of Crank pin 6 5/8" Size of Crank webs 10 1/2" x 4 3/8" Dia. of thrust shaft under collars 6 3/4" Dia. of screw 8 1/2" Pitch of Screw 11 1/2" No. of Blades 4 State whether moveable no. Total surface 30 ft.
 No. of Feed pumps 1. Diameter of ditto 2 1/2" Stroke 11" Can one be overhauled while the other is at work.
 No. of Bilge pumps 1. Diameter of ditto 2 1/2" Stroke 11" Can one be overhauled while the other is at work.
 No. of Donkey Engines 2. Sizes of Pumps 2 1/2" x 3 1/2" x 5" duplex. No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room one of 2". In Holds, &c. Fishhold & Slushwell, one each of 2".
 Also ejector drawing from Fishhold & Slushwell, with separate suction from engine room 2" dia.
 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 Suctions from Fishhold, Slushwell & 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 21. 3. 11 of Stern Tube 15. 3. 11 Screw shaft and Propeller 15. 3. 11
 Is the Screw Shaft Tunnel watertight none. Is it fitted with a watertight door worked from.

BOILERS, &c.—(Letter for record 507) Manufacturers of Steel The S. Co. of Scotland Ld. B. Colville & Sons Ld.
 Total Heating Surface of Boilers 1149 ft. Is Forced Draft fitted no. No. and Description of Boilers One, cyl., multi, single ended.
 Working Pressure 180 lbs. Tested by hydraulic pressure to 360. Date of test 6. 3. 11 No. of Certificate 648.
 Can each boiler be worked separately. Area of fire grate in each boiler 50.6 ft. No. and Description of Safety Valves to each boiler 2: direct spring. Area of each valve 5.94 in. Pressure to which they are adjusted 185. Are they fitted with easing gear yes.
 Smallest distance between boilers or uptakes and bunkers or woodwork 6" Mean dia. of boilers 12.6" Length 10.3" Material of shell plates S.
 Thickness 1 1/2" Range of tensile strength 28-32 Are the shell plates welded or flanged no. Descrip. of riveting: cir. seams A.T. lap long. seams dble. straps Diameter of rivet holes in long. seams 1 3/16" Pitch of rivets 8 1/4" Lap of plates or width of butt straps 16 1/2" x 10 1/2" x 32.
 Per centages of strength of longitudinal joint rivets 92.3 plate 86.0 Working pressure of shell by rules 182.9 Size of manhole in shell 16 1/2" x 22".
 Size of compensating ring 28" dia. x 1 1/2" No. and Description of Furnaces in each boiler 3, plain Material S. Outside diameter 40 1/2".
 Length of plain part top 41" bottom 34" Thickness of plates crown 3/4" bottom 3/4" Description of longitudinal joint weld. No. of strengthening rings none.
 Working pressure of furnace by the rules 190. Combustion chamber plates: Material S. Thickness: Sides 5" Back 5" Top 5" Bottom 5"
 Pitch of stays to ditto: Sides 8 1/2" x 8 1/2" Back 8 1/2" x 8" Top 9 1/2" x 4 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 198.
 Material of stays S. Diameter at smallest part 1 1/2" full Area supported by each stay 68 in. Working pressure by rules 194. End plates in steam space: Material S. Thickness 1" Pitch of stays 14" x 15" How are stays secured A.T. & W. Working pressure by rules 184. Material of stays S.
 Diameter at smallest part 2 1/2" Area supported by each stay 255 in. Working pressure by rules 183. Material of Front plates at bottom S.
 Thickness 1 3/16" Material of Lower back plate S. Thickness 3/4" Greatest pitch of stays 13" x 8 1/2" Working pressure of plate by rules 286.
 Diameter of tubes 3 1/2" x 4 1/2" Pitch of tubes 4 3/4" x 4 3/4" Material of tube plates S. Thickness: Front 1 3/16" x 1 1/2" d. Back 1/16" Mean pitch of stays 9 1/2"
 Pitch across wide water spaces 15" Working pressures by rules 184. Girders to Chamber tops: Material S. Depth and thickness of girder at centre 8" x 1 1/2" Length as per rule 32" Distance apart 4 1/2" Number and pitch of stays in each tier, 9 1/2"
 Working pressure by rules 189. Superheater or Steam chest; how connected to boiler none. 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

002956-002969-0026

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 easing 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 _____
 Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____ Rivets _____ 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; bolts & nuts assorted, & iron of various sizes.

The foregoing is a correct description,

Arthur Langshaw Manufacturers of Main Engines & Boilers.

Dates of Survey while building { During progress of work in shops -- } 1910 Nov 4, 15, 18, 22, 28. Dec 6, 12, 16, 20, 22, 28. 1911 Jan 6, 10, 13, 16, 24. Feb 3, 10, 14, 16.
 { During erection on board vessel --- } 22, 24. March 3, 6, 10, 13, 16, 17, 18, 20, 21, 23, 24, 29. April 1.
 Total No. of visits 36 Is the approved plan of main boiler forwarded herewith Yes.

Dates of Examination of principal parts—Cylinders 12.28 13 3 Slides 24 Covers 14 13 Pistons 28 6 3.14 3 Rods 28 10 10
 Connecting rods 20.28 10 2 Crank shaft 22.28 13.24 Thrust shaft 24 Tunnel shafts 14.22 Screw shaft 10.24 3.22 Propeller 22.24
 Stern tube 6.10.13 Steam pipes tested 23.3.11 Engine and boiler seatings 20.22 24 Engines holding down bolts 18.20.23
 Completion of pumping arrangements 24.3.11 Boilers fixed 21.3.11 Engines tried under steam 29.3.11
 Main boiler safety valves adjusted 29.3.11 Thickness of adjusting washers Port 1/4" Starboard 3/8" base.
 Material of Crank shaft I.S. Identification Mark on Do. 569A Material of Thrust shaft S. Identification Mark on Do. 569A.
 Material of Tunnel shafts S. Identification Marks on Do. 572A Material of Screw shafts S. Identification Marks on Do. 573A.
 Material of Steam Pipes Copper, solid drawn, 3 1/2" bore, No 6 B.M.G. Test pressure 360 lbs per square inch.

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

These Engines and the Boiler, have been constructed under special survey, and in accordance with the Secretary's letter, the Rules, and approved plan. The materials, and workmanship are good. When completed, and properly fitted on board, they were tried under steam at moorings, with satisfactory results, and are now in good working order, and in my opinion, entitled to the record **L.M.C. 4.11** in the Register Book.

It is submitted that this vessel is eligible for THE RECORD.

Y LMC 4.11

The amount of Entry Fee .. £ 1 : : When applied for, .. 3.11.1911.
 Special .. £ 9.18 : :
 Donkey Boiler Fee .. £ : : : When received, .. 6/4/1911.
 Travelling Expenses (if any) £ : : : .. 7.4

Committee's Minute

Assigned

FRI 7 APR 1911

+ LMC 4.11

MACHINERY CERTIFICATE WRITTEN

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



© 2020

Lloyd's Register Foundation

Certificate (if required) to be sent to Aberdeen Office.

(The Surveyors are requested not to write on or below the space for Committee's Minute.)