

REPORT ON MACHINERY

No. 25856
TUES. 22 OCT 1907

Received at London Office

Date of writing Report 19 When handed in at Local Office 19 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 7th Dec 05 Last Survey Oct 5th 1907
 Reg. Book. 1724 on the J J "Strathleven" (Number of Visits 1)
 Master W Hamilton Built at Port Glasgow By whom built W Hamilton When built 1907
 Engines made at Glasgow By whom made David Rowan & Co (No 458) when made 1907
 Boilers made at do By whom made do when made 1907
 Registered Horse Power 366 Owners Burrell & Son Port belonging to Glasgow
 Nom. Horse Power as per Section 28 366 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 25-41-68 Length of Stroke 48 Revs. per minute 142 Dia. of Screw shaft 14.2 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 Yes If the liner is in more than one length are the joints burned No 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 No If two liners are fitted, is the shaft lapped or protected between the liners No Length of stern bush 4-10
 Dia. of Tunnel shaft 12.68 as per rule 13 Dia. of Crank shaft journals 13.3 as per rule 13.74 Dia. of Crank pin 13.74 Size of Crank webs 8.2 Dia. of thrust shaft under collars 14.4 Dia. of screw 17.6 Pitch of Screw 17.9 No. of Blades 4 State whether moceable No Total surface 93 #
 No. of Feed pumps 2 Diameter of ditto 3.2 Stroke 24 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 4 Stroke 24 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 3 Sizes of Pumps 9x12x10, 9x5x8, 5x3x3 No. and size of Suctions connected to both Bilge and Donkey pumps 2-3.2" each hold
 In Engine Room 4-3.2" In Holds, &c. 2-3.2" each hold
 No. of Bilge Injections 1 sizes 6" Connected to condenser, or to circulating pump plump Is a separate Donkey Suction fitted in Engine room & size Yes 3.2"
 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 No
 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 For suction How are they protected wood covering
 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 of Stern Tube 7 Screw shaft and Propeller Iron: Greenock
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top grating

BOILERS, &c.—(Letter for record (S)) Manufacturers of Steel Clydebridge Steel Co
 Total Heating Surface of Boilers 5868 Is Forced Draft fitted No No. and Description of Boilers 3 Single Ended
 Working Pressure 180 lb Tested by hydraulic pressure to 360 lb Date of test 10/18/07 No. of Certificate 9122
 Can each boiler be worked separately Yes Area of fire grate in each boiler 55 # No. and Description of Safety Valves to each boiler 2 Cockburn Area of each valve 5.94 Pressure to which they are adjusted 185 lb Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork Widest of stokehold Mean dia. of boilers 14.0 Length 11.0 Material of shell plates steel
 Thickness 1.3/16 Range of tensile strength 28.2 to 31.7 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D. R. L. long. seams D. B. S. Diameter of rivet holes in long. seams 1.7/16 Pitch of rivets 8.3/4 Lap of plates or width of butt straps 19.5
 Per centages of strength of longitudinal joint rivets 96.8 Working pressure of shell by rules 188 lb Size of manhole in shell 18 x 12 plate 85
 Size of compensating ring Flanged No. and Description of Furnaces in each boiler 3 Dighton Material steel Outside diameter 3.8 1/4
 Length of plain part 1 Thickness of plates 17/32 Description of longitudinal joint weld No. of strengthening rings 1
 Working pressure of furnace by the rules 185 Combustion chamber plates: Material steel Thickness: Sides 7/8 Back 7/8 Top 7/8 Bottom 7/8
 Pitch of stays to ditto: Sides 7 7/8 Back 7 7/8 Top 7 1/4 x 8 1/4 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 278
 Material of stays steel Diameter at smallest part 1.48 Area supported by each stay 62 Working pressure by rules 190 End plates in steam space: Material steel Thickness 1 1/4 Pitch of stays 18 x 18 How are stays secured D. nuts Working pressure by rules 246 Material of stays steel
 Diameter at smallest part 7.59 Area supported by each stay 324 Working pressure by rules 216 Material of Front plates at bottom steel
 Thickness 7/8 Material of Lower back plate steel Thickness 13/16 Greatest pitch of stays 13 1/4 Working pressure of plate by rules 193
 Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates steel Thickness: Front 7/8 Back 27/32 Mean pitch of stays 9
 Pitch across wide water spaces 13 1/4 Working pressures by rules 180 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 8 1/2 x 3 1/2 x 2 Length as per rule 3.0 Distance apart 8 1/4 Number and pitch of stays in each 3-7 1/2
 Working pressure by rules 200 Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked separately Yes 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

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Lloyd's Register Foundation

VERTICAL DONKEY BOILER— Manufacturers of Steel *None*

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 _____ Stayed by _____
 Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— *Propeller shaft, propeller, set of piston rings, set of air & circulating pump valves, etc. & the bolts & nuts required by the Rules.*

The foregoing is a correct description,

Manufacturer.

pro David Rowan & Co

Dates of Survey while building
 During progress of work in shops— *1907. Dec. 7, 14, 21, 28, 1908. Jan. 12, 19, Feb. 5, 12, 19, Apr. 2, 9, 16, 23, May 7, 14, 21, June 4, 11, 18, 25, July 9, 16, 23, Aug. 6, 13, 20, 27, Sep. 3, 10, 17, 24, 31, Nov. 7, 14, 21, 28, Dec. 5, 12, 19, 26, 31*
 During erection on board vessel— *1907. Jan. 4, 11, 18, 25, Feb. 1, 8, 15, 22, Mar. 9, 16, 23, Apr. 6, 13, 20, 27, May 4, 11, 18, 25, June 1, 8, 15, 22, July 6, 13, 20, 27, Aug. 3, 10, 17, 24, 31, Sep. 7, 14, 21, 28, Oct. 5, 12, 19, 26, 31*
 Total No. of visits *76* Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders *18/6/07 etc* Slides *18/6/07 etc* Covers *29/5/07* Pistons *29/5/07* Rods *29/5/07*
 Connecting rods *29/5/07* Crank shaft *26/4/07 etc* Thrust shaft *26/4/07* Tunnel shafts *18/6/07* Screw shaft *8/4/07 etc* Propeller *8/7/07 etc*
 Stern tube *8/7/07 etc* Steam pipes tested *13/9/07* Engine and boiler seatings *11/9/07* Engines holding down bolts *17/9/07*
 Completion of pumping arrangements *17/9/07* Boilers fixed *17/9/07* Engines tried under steam *5/10/07*
 Main boiler safety valves adjusted *19/9/07* Thickness of adjusting washers *S.P. 3/8, 5/16, C. 3/4 P 5/16 P. 5/32*
 Material of Crank shaft *Steel* Identification Mark on Do. *(H.G.S.)* Material of Thrust shaft *Steel* Identification Mark on Do. *(H.G.S.)*
 Material of Tunnel shafts *Steel* Identification Marks on Do. Material of Screw shafts *Iron* Identification Marks on Do. *(H.G.S.)*
 Material of Steam Pipes *Copper* Test pressure *380 lbs.*

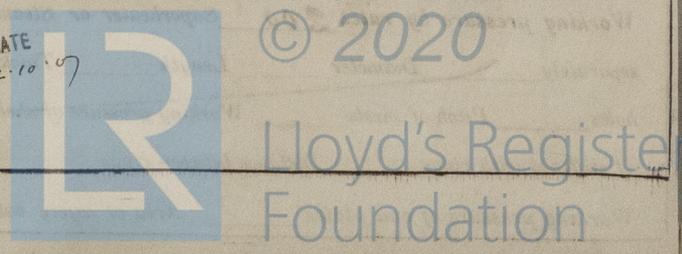
General Remarks (State quality of workmanship, opinions as to class, &c.)
The engines & boilers of this vessel have been constructed under special survey & are of good materials & workmanship. They have been securely fitted on board & satisfactorily tried fitted on board under full power.

This vessel is in my opinion eligible to have notation *L.M.C. 10.07* in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. *L.M.C. 10.07*

Same as Strathdon
 The amount of Entry Fee.. £ *3* : : When applied for, *23/10/07*
 Special £ *58* . 6 : : *21/06/07*
 Donkey Boiler Fee £ : : : When received, *24/10/07*
 Travelling Expenses (if any) £ : : : *25/10/07*

Committee's Minute *Glasgow 21 OCT 1907*
 Assigned *L.M.C. 10.07*
 H. Gardner-Smith
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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