

REPORT ON MACHINERY

Received at London Office

WED. 23 SEP 1908

Date of writing Report 19 When handed in at Local Office 21st Sept. 1908 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 7th Dec. 1905 Last Survey 10th Sept. 1908
 Reg. Book. S. J. "Rinaldo" (Number of Visits 83)
 Master Built at Port Glasgow By whom built Russell & Co. Tons { Gross 4321
 Net 2792
 Engines made at Glasgow By whom made David Rowan & Co. when made 1908
 Boilers made at do By whom made do when made 1908
 Registered Horse Power owners Thomas Wilson Sons & Co. Ltd Port belonging to Hull
 Nom. Horse Power as per Section 28 394 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 26.42.70 Length of Stroke 48 Revs. per minute 60 Dia. of Screw shaft 14.6 Material of screw shaft 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 — 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 4.11
 Dia. of Tunnel shaft as per rule 12.99 Dia. of Crank shaft journals as per rule 13.623 Dia. of Crank pin 14 Size of Crank webs 8 7/8 Dia. of thrust shaft under collars 14 1/2 Dia. of screw 17.10 Pitch of Screw 18.6 No. of Blades 4 State whether moceable no Total surface 98.7
 No. of Feed pumps 2 Diameter of ditto 3 3/4 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, 8x5x9, 5 1/2 x 3 1/2 x 5 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 4 - 3 1/2 In Holds, &c. 2 - 3 1/2 each hold
 No. of Bilge Injections 1 sizes 6" Connected to condenser, or to circulating pump — Is a separate Donkey Suction fitted in Engine room & size Yes 3 1/2
 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 —
 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 704" 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 exam'd
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top grating

BOILERS, &c.—(Letter for record 13) Manufacturers of Steel The Clyde Bridge Steel Co. Ltd
 Total Heating Surface of Boilers 6438 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 26/11/06 No. of Certificate 8292
 Can each boiler be worked separately — Area of fire grate in each boiler 57.7 No. and Description of Safety Valves to each boiler Cock down, double Area of each valve 5.9 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 abt. 2 ft. Mean dia. of boilers 14.6 Length 11.6 Material of shell plates steel
 Thickness 1 3/16 Range of tensile strength 28.2631.7 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 5/16 Pitch of rivets 8 3/4 Lap of plates or width of butt straps 19 1/4
 Per centages of strength of longitudinal joint 96.7 Working pressure of shell by rules 184 lb Size of manhole in shell 16 x 12
 Size of compensating ring 2.3 x 2.7 No. and Description of Furnaces in each boiler 3 Dighton Material steel Outside diameter 3.10 3/8
 Length of plain part top Thickness of plates bottom 9 1/16 Description of longitudinal joint weld No. of strengthening rings —
 Working pressure of furnace by the rules 190 lb Combustion chamber plates: Material steel Thickness: Sides 9/32 Back 9/32 Top 9/32 Bottom 7/8
 Pitch of stays to ditto: Sides 7 1/8 Back 7 1/8 Top 7 1/8 Bottom 7 1/8 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 195 lb
 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 3/8 Pitch of stays 18 x 30 1/2 How are stays secured D. nuts Working pressure by rules 180 lb Material of stays steel Diameter at smallest part 8.85 Area supported by each stay 370 Working pressure by rules 240 Material of Front plates at bottom steel Thickness 7/8 Material of Lower back plate steel Thickness 1 3/16 Greatest pitch of stays 13 1/4 Working pressure of plate by rules 190
 Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 x 4 5/8 Material of tube plates steel Thickness: Front 7/8 Back 13/16 Mean pitch of stays 11 3/8
 Pitch across wide water spaces 13 1/2 Working pressures by rules 184 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 9 x 7 1/2 x 2 Length as per rule 35 Distance apart 7 1/8 Number and pitch of stays in each 3 - 7 1/8
 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 —
 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

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. _____ Description None.

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, set of air pump valves, put & hinge pump valves, set of safety valve springs, 12 condenser gaskets, 12 boiler tubes, etc., & the bolts & nuts required by the gaskets.

The foregoing is a correct description,

Manufacturer. for David Rowan & Co

Dates of Survey while building	During progress of work in shops—	1905. Dec. 7. 16. 21. 28. 1906. Jan. 12. 19. Feb. 6. 8. 13. 16. Apr. 13. 21. 27. May 24. 31. June 1. 6. 13. 28. 28.
	During erection on board vessel—	July 9. 11. Aug. 1. 16. 31. Sept. 5. Oct. 2. 5. 11. 18. 24. 31. Nov. 2. 13. 20. Dec. 13. 20. 30. 1907. Jan. 4. 14.
	Total No. of visits	83.

Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 16/9/07 Slides 16/9/07 Covers 16/9/07 Pistons 16/9/07 Rods 16/9/07

Connecting rods 16/9/07 Crank shaft 3/8/08 Thrust shaft 3/8/08 Tunnel shafts 3/8/08 Screw shaft 16/9/07 Propeller 16/9/07

Steam tube 16/9/07 Steam pipes tested 28/8/08 Engine and boiler seatings 21/8/08 Engines holding down bolts 21/8/08

Completion of pumping arrangements 21/8/08 Boilers fixed 21/8/08 Engines tried under steam 10/9/08

Main boiler safety valves adjusted 4/9/08 Thickness of adjusting washers B.B. 5/16 P 24, C 5/16 P 16, P.B. 5/32 P 17

Material of Crank shaft steel Identification Mark on Do. H.B.S. Material of Thrust shaft steel Identification Mark on Do. H.B.S.

Material of Tunnel shafts steel Identification Marks on Do. H.B.S. Material of Screw shafts steel Identification Marks on Do. H.B.S.

Material of Steam Pipes Copper Test pressure 360 lbs

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

These engines & boilers have been constructed under Special Survey or are of good materials & workmanship. They have been securely fitted on board & satisfactorily tried under steam.

This vessel is in my opinion eligible to have notation L.M.C. 9.08 in the Register-Book.

It is submitted that this vessel is eligible for the GRAND L.M.C. 9.08

The amount of Entry Fee. 3.14

Special 39.14 When applied for. 21/9/08

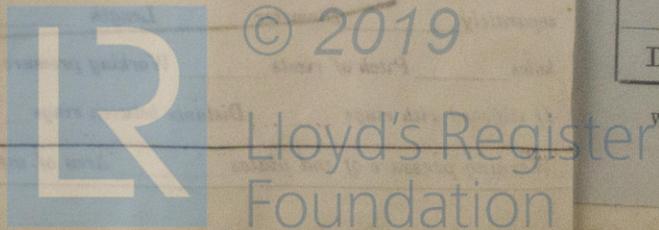
Donkey Boiler Fee £ : : When received. 23/9/08

Travelling Expenses (if any) £ : : 19

H. Rowner-Smith
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute GLASGOW 22 SEP. 1908

Assigned + LMC 9.08. 6.B.6



WRITTEN 23/9/08

Glasgow

Certificate (if required) to be sent to

Form No. 10
Write "See Strake" opposite the corresponding letter.
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Leng. an thick
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