

Received at London Office JUN 4-1912

Date of writing Report 19 When handed in at Local Office 3.6.1912 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 25.7.11 Last Survey 16.5.1912

Reg. Book. 31 Sep. on the J. J. "Jacatra" (Number of Visits 38)

Master J. Karn Built at Port Glasgow By whom built W. Hamilton & Co. Tons Gross 5366 Net 5437

Engines made at Glasgow By whom made David Rowan & Co. when made 1912

Boilers made at do By whom made do when made 1912

Registered Horse Power Owners Rotterdamse Lloyd Port belonging to Rotterdam

Nom. Horse Power as per Section 28 535 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

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

Dia. of Cylinders 27 1/2 - 45 - 75 Length of Stroke 51 Revs. per minute 70 Dia. of Screw shaft as per rule 15 3/4 as fitted 15 1/2 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 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 5 3/4

Dia. of Tunnel shaft as per rule 13 7/8 as fitted 14 3/8 Dia. of Crank shaft journals as per rule 14 1/2 as fitted 14 3/4 Dia. of Crank pin 14 3/4 Size of Crank webs 9 1/2 Dia. of thrust shaft under collars 15 Dia. of screw 18 1/2 Pitch of Screw 19 1/2 No. of Blades 4 State whether moveable No Total surface 116

No. of Feed pumps 2 Diameter of ditto 10 1/2 Stroke 21 Can one be overhauled while the other is at work Yes Weirs

No. of Bilge pumps 2 Diameter of ditto 4 1/2 Stroke 27 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 Sizes of Pumps 9 x 12 x 12, 8 1/2 x 8 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

Tunnel 2 3/4

No. of Bilge Injections 1 sizes 8 Connected to condenser, or to circulating pump 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 Main below Bilge 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 Suctions 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 2 of Stern Tube 7 Screw shaft and Propeller Sumner Rpt.

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top grating

**BOILERS, &c.—(Letter for record (7) Manufacturers of Steel** David Colville & Sons Ltd.

Total Heating Surface of Boilers 9600 Is Forced Draft fitted No No. and Description of Boilers 4 Single Ended

Working Pressure 180 lb Tested by hydraulic pressure to 360 lb Date of test 30/12/11 No. of Certificate 11322

Can each boiler be worked separately Yes Area of fire grate in each boiler 52 1/2 No. and Description of Safety Valves to each boiler Cockburn Double Area of each valve 5 1/4 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 12 1/2 Mean dia. of boilers 15 0 Length 11 6 Material of shell plates Steel

Thickness 1 3/32 Range of tensile strength 28 532 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 9 Lap of plates or width of butt straps 19 1/4

Per centages of strength of longitudinal joint rivets 21 1/8 plate 85 1/4 Working pressure of shell by rules 183 lb Size of manhole in shell 16 x 12

Size of compensating ring Flanged No. and Description of Furnaces in each boiler 3 Jackson Material Steel Outside diameter 3-10 3/8

Length of plain part top bottom Thickness of plates crown 7 1/16 bottom 5 Description of longitudinal joint weld No. of strengthening rings

Working pressure of furnace by the rules 190 Combustion chamber plates: Material Steel Thickness: Sides 3 1/32 Back 3 1/32 Top 3 1/32 Bottom 3 1/4

Pitch of stays to ditto: Sides 9 x 8 3/4 Back 9 1/2 x 8 1/2 Top 9 1/2 x 8 If stays are fitted with nuts or riveted heads No Working pressure by rules 184

Material of stays Iron Diameter at smallest part 2 1/8 Area supported by each stay 40 Working pressure by rules 193 End plates in steam space:

Material Steel Thickness 1 9/32 Pitch of stays 21 x 19 How are stays secured D. R. L. Working pressure by rules 183 Material of stays Steel

Diameter at smallest part 7 06 Area supported by each stay 400 Working pressure by rules 184 Material of Front plates at bottom Steel

Thickness 7/8 Material of Lower back plate Steel Thickness 27 3/32 Greatest pitch of stays 12 3/4 Working pressure of plate by rules 200

Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 x 4 3/8 Material of tube plates Steel Thickness: Front 7/8 Back 13/16 Mean pitch of stays 11 1/8

Pitch across wide water spaces 13 1/2 Working pressures by rules 190 Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8 5/8 x 7 1/2 Length as per rule 32 1/2 Distance apart 9 1/2 Number and pitch of stays in each 3 - 8

Working pressure by rules 182 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 \_\_\_\_\_ 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 end bolts, 2 bottom end bolts, 2 main bearing bolts & set of coupling bolts—all with nuts, feed & bilge pump valves, assorted iron bolts. Also propeller shaft, propeller, 1 crank pin bush, 1/2 crank shaft, 150 feet bars, 12 boiler tubes, 12 condenser tubes, etc.

The foregoing is a correct description,

for David Rowan & Co. Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1911. July 25. Aug. 17. 22. 30. Sept. 19. 21. 27. Oct. 5. 9. 18. 30. Nov. 15. 16. 22. 27.  
During erection on board vessel --- Dec. 1. 8. 11. 20. 28. 1912. Jan. 9. 17. 24. 31. Feb. 6. 7. 16. Mar. 8. 18. 20.  
Total No. of visits { 38. April 2. 17. 22. 26. 29. May 8. 10. 16.

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " " None

Dates of Examination of principal parts—Cylinders 21/9/11 Slides 16/2/12 Covers 16/2/12 Pistons 6/2/12 Rods 6/2/12  
Connecting rods 6/2/12 Crank shaft 9/10/11 Thrust shaft 6/2/12 Tunnel shafts 6/2/12 Screw shaft 6/2/12 Propeller 6/2/12  
Stern tube 6/2/12 Steam pipes tested 29/4/12 Engine and boiler seatings 26/4/12 Engines holding down bolts 26/4/12  
Completion of pumping arrangements 8/5/12 Boilers fixed 8/5/12 Engines tried under steam 16/5/12  
Main boiler safety valves adjusted 10/5/12 Thickness of adjusting washers A.P. P 7/16, 5 5/16, A.S. P 9 5/8, F.P. P 7/16, 5 3/8, F.S. P 1 1/2  
Material of Crank shaft Steel Identification Mark on Do. 1465 Material of Thrust shaft Steel Identification Mark on Do. 1465  
Material of Tunnel shafts Steel Identification Marks on Do. 1465 Material of Screw shafts Iron Identification Marks on Do. 1465  
Material of Steam Pipes Wrought Iron Test pressure 540 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 under steam.

This vessel is in my opinion eligible to have notation \* LMC 5, 12 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 5.12.

The amount of Entry Fee 3. £ : : When applied for, 3. 6. 12.  
Special 46-15-0. £ : :  
Donkey Boiler Fee .. £ : :  
Travelling Expenses (if any) £ : : When received, 5. 6. 12.

Committee's Minute

Assigned

TUE JUN 4-1912

thurs 5. 12

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



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