

REPORT ON MACHINERY.

Port of Glasgow

Received at London Office **TUES. 31 DEC 1907**

No. in Survey held at Glasgow Date, first Survey 25-12 Last Survey 25-12-1907
 Reg. Book. on the S/S "Kintail" (Number of Visits)
 Master Built at Glasgow By whom built L. Couello & Co. (S/S No. 317) Tons { Gross 3537 Net 2252 When built 1907
 Engines made at Glasgow By whom made Dunson & Jackson, C. (824) when made 1907
 Boilers made at ditto By whom made ditto when made 1907
 Registered Horse Power Owners (J. Gardiner & Co.) Port belonging to Glasgow.
 Nom. Horse Power as per Section 28 358 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 25" 41" 66" Length of Stroke 45" Revs. per minute 71 Dia. of Screw shaft as per rule 3 25/32" 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 Yes 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 No
 liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 5' 7 1/2"
 Dia. of Tunnel shaft as per rule 12 3/4" as fitted 12 1/2" Dia. of Crank shaft journals as per rule 13.0" as fitted 13 1/4" Dia. of Crank pin 13 1/4" Size of Crank webs 8 1/2 x 2 1/2" Dia. of thrust shaft under collars 13 1/4" Dia. of screw 16.6 Pitch of Screw 18.0 No. of Blades 4 State whether moveable Yes Total surface 884
 No. of Feed pumps 2 Diameter of ditto 3 1/2" 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 4 Sizes of Pumps WEIRS 6 x 8 x 21" Donkey 4 1/2 x 3 x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 4 3 1/2" 4 Sep 3 1/2" In Holds, &c. 9" 2. 3 1/2" 9" 2. 2. 3 1/2"
9" 3" Deep Tank 2. 3" 9" 4 1-3 1/2" in Hold Wall Tunnel 2 1/2"
 No. of Bilge Injections 1 sizes 5" 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 Yes
 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 Yes How are they protected Yes
 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. 11. 07 of Stern Tube 21. 11. 07 Screw shaft and Propeller 21. 11. 07
 Is the Screw Shaft Tunnel watertight Apparently Is it fitted with a watertight door Yes worked from Upper Engine Room Platform

BOILERS, &c.—(Letter for record 8) Manufacturers of Steel Steel Company of Glydebridge
 Total Heating Surface of Boilers 4862 sq ft Is Forced Draft fitted Yes No. and Description of Boilers 2 Single Endid.
 Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 18. Oct. 1907 No. of Certificate 9156
 Can each boiler be worked separately Yes Area of fire grate in each boiler 46.125 sq ft No. and Description of Safety Valves to each boiler 2 Double Spring Area of each valve 7.06 Pressure to which they are adjusted 185 Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 2-6" Mean dia. of boilers 14-10 Length 11-6 Material of shell plates S
 Thickness 3/8" Range of tensile strength 28/32 Are the shell plates welded or flanged Yes Descrip. of riveting: cir. seams TR. Corbis Seam
 long. seams TR. O.B.S. Diameter of rivet holes in long. seams 13/8" Pitch of rivets 9/8" Top of plates or width of butt straps 1-8 1/8"
 Per centages of strength of longitudinal joint rivets 88% plate 85% Working pressure of shell by rules 208 Size of manhole in shell 16' x 12"
 Size of compensating ring M. Mesh No. and Description of Furnaces in each boiler 3 Deighton Material S Outside diameter 3.9'
 Length of plain part top 7' 9 1/8" bottom 7' 9 1/8" Thickness of plates crown 7/8" bottom 7/8" Description of longitudinal joint Weld No. of strengthening rings Yes
 Working pressure of furnace by the rules 189 Combustion chamber plates: Material S Thickness: Sides 2 1/32" Back 5/8" Top 2 1/32" Bottom 7/8"
 Pitch of stays to ditto: Sides 8 1/4 x 9 3/8" Back 7 3/4 x 9 1/4" Top 8 7/8 x 8 3/4" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 184
 Material of stays S Diameter at smallest part 7/8" Area supported by each stay 72 Working pressure by rules 182 End plates in steam space: Material S Thickness 3/32" Pitch of stays 7 3/4 x 16 1/8" How are stays secured DN Working pressure by rules 186 Material of stays S
 Diameter at smallest part 5.78 Area supported by each stay 286 sq ft Working pressure by rules 205 Material of Front plates at bottom S
 Thickness 7/8" Material of Lower back plate S Thickness 7/8" Greatest pitch of stays 15 3/4" Working pressure of plate by rules 205"
 Diameter of tubes 2 1/2" Pitch of tubes 3 3/8 x 3 3/4" Material of tube plates S Thickness: Front 7/8" Back 3/4" Mean pitch of stays 9 3/16"
 Pitch across wide water spaces 13 1/2" Working pressures by rules 182 Girders to Chamber tops: Material Iron Depth and thickness of girder at centre 8 1/2 x 15 1/16 (2) Length as per rule 30 5/8" Distance apart 8 3/4" Number and pitch of stays in each 2 at 8 7/8"
 Working pressure by rules 185 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

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
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
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:— 4 Piston Blads. One set of Top, Bottom and Bolt 2 Main Bearing Bolt. 1 set of Coupling Bolt. 1 set of Feed & Bilge Pump Valves. 1 set of Main Donkey Boiler Plug Valves. 2 Top & Bottom End Bolts. 1 Valve Shackle. 2 Eccentric Strap Bolt 2 Safety Valve Springs for Main Boilers. 1 set for Donkey Boiler. 1 Spare Piston Shaft. 1 set of Piston Springs for #1 & 2. A quantity of assorted Bolt Nuts & Washers.

The foregoing is a correct description,
 For **DUNSMUIR & JACKSON, Limited**
James Fletcher Manufacturer.

Dates of Survey while building: During progress of work in shops - 1907, Apr. 16, 27, May 1, 2, 20, 27, June 9, 11, 13, 15, 19, July 23, 25, Aug 2, 5, 9, 10, 14, 21, 26, Sep 2, 5, 7, 9, 11, 13, 20, 23, Oct 1, 4, 7, 14, 18, 21, 24, 31.
 During erection on board vessel - Nov 4, 6, 12, 16, 20, 21, 29, Dec 3, 4, 5, 9, 12, 16, 17, 19, 20, 25.
 Total No. of visits 53.

Is the approved plan of main boiler forwarded herewith **Yes**
 " " " donkey " " " **Yes**

Dates of Examination of principal parts—Cylinders 5.8.07, 14.10.07 Slides 7.9.07 Covers 21.8.07, 9.9.07 Pistons 9.9.07 Rods 14.10.07
 Connecting rods 21.8.07 Crank shaft 5.9.07 Thrust shaft 2.8.07 Tunnel shafts 5.8.07, 9.9.07 Screw shaft 13.11.07 Propeller 13.11.07
 Stern tube 13.11.07 Steam pipes tested 5.12.07 Engine and boiler seatings 21.11.07 Engines holding down bolts 9.12.07
 Completion of pumping arrangements 9.12.07 Boilers fixed 4.12.07 Engines tried under steam 25 Dec 07
 Main boiler safety valves adjusted 2.12.07 Thickness of adjusting washers PR 1/4 F SV 1/4 PR 1/4 F SV 3/16 AY 3/8 FY 7/16
 Material of Crank shaft Iron Identification Mark on Do. WGM Material of Thrust shaft Iron Identification Mark on Do. WGM
 Material of Tunnel shafts Iron Identification Marks on Do. WGM Material of Screw shafts Iron Identification Marks on Do. WGM
 Material of Steam Pipes Iron Test pressure 540 lbs

General Remarks (State quality of workmanship, opinions as to class, &c. These Engines & Boilers have been constructed & fitted on board under Special Survey in accordance with the approved plan. They have been securely fitted on board & the workmanship & material are of good quality. The Machinery is in my opinion eligible for the Record of **L.M.C. 12-07**

It is submitted that this vessel is eligible for **THE RECORD.** **L.M.C. 12.07.**
ELEC LIGHT
F.D.
 HC 2-1-08.

Certificate (if required) to be sent to Committee's Minute.

The amount of Entry Fee... £ 3 : : : When applied for.
 Special ... £ 37 : 18 : : 27/12/1907
 Donkey Boiler Fee ... £ : : :
 Travelling Expenses (if any) £ : : : When received, 30/12/1907

Wm Gordon-Mucluis
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute Glasgow 30 DEC 1907

Assigned + LMC 12.07 FD



Signal
 Off
 No. Date
 Whether Foreign
 British
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 Number
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 Framework vessel
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