

## REPORT ON MACHINERY.

No. 26115

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)

Tons { Gross *3537*Net *2252*When built *1907*

Master

Built at *Glasgow*By whom built *L. Couello & Co. (S/S 90-317)*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 13 25*Material of *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*liners are fitted, is the shaft lapped or protected between the liners *Yes*Length of stern bush *57 1/2"*Dia. of Tunnel shaft *as per rule 12 39*Dia. of Crank shaft journals *as per rule 13 0*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. *No. 1. 2. 3 1/2" No. 2. 2. 3 1/2"**No. 3 or Deep Tank 2. 3"**No. 4 1-3 1/2" in Hold Hall 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 & Clydebridge*Total Heating Surface of Boilers *4862*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. 02. 1907*No. of Certificate *9156*Can each boiler be worked separately *Yes*Area of fire grate in each boiler *46. 125*

No. and Description of Safety Valves to

each boiler *2 Dual 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**Circle Seams*long. seams *TR. O.B.S.*Diameter of rivet holes in long. seams *3/8"*Pitch of rivets *9/8"*Gap of plates or width of butt straps *1-8 1/8"*Per centages of strength of longitudinal joint *88 9/10*plate *85 9/10*Working pressure of shell by rules *208*Size of manhole in shell *16 x 12"*Size of compensating ring *M. N. H.*No. and Description of Furnaces in each boiler *3 Dighton*Material *S*Outside diameter *39"*Length of plain part *top**bottom*Thickness of plates *top**bottom*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 *Yes*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 7/8"*Area supported by each stay *286*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

WS85-0137



# 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
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.	Dia. of stays	Plates
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 Propeller Blades. One set of Top, Bottom and Bolt 2 Main Bearing Bolts. 1 set of Coupling Bolts. 1 set of Feed & Bilge Pump Valves. 1 set of Main Donkey Boiler Flue Valves. 2 Top & Bottom End Bolts. 1 Valve Spindle 2 Eccentric Strap Bolts 2 Safety Valve Springs for Main Boilers. One for Donkey Boiler. 1 Spare Propeller Shaft. 1 set of Piston Springs for H.P. & a quantity of assorted Bolt Nuts & Washers.

The foregoing is a correct description,

*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. 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. 13. 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. 9.8.07 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 3/8 AY 3/8 FY 7/16 LLOYDS Material of Crank shaft Iron Identification Mark on Do. W.G.M. Material of Thrust shaft Iron Identification Mark on Do. W.G.M. Material of Tunnel shafts Iron Identification Marks on Do. W.G.M. Material of Screw shafts Iron Identification Marks on Do. W.G.M. Material of Steam Pipes Iron Test pressure 540 lb.

**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.*

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

Committee's Minute **Glasgow 30 DEC 1907**

Assigned **+ LMC 12.07** *FD*

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



Certificate (if required) to be sent to

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