

JUN 24 OCT 1905

Port of Glasgow

Received at London Office

10

No. in Survey held at Glasgow  
Reg. Book.Date, first Survey 30 Nov 04 Last Survey Oct 16<sup>th</sup> 1905

(Number of Visits)

23 Sep. on the

"J. J. Mac Isles"

Gross

Tons

Net

When built 1905

Master

Built at Port Glasgow By whom built W Hamilton & CoEngines made at GlasgowBy whom made David Rowan & Co (Ld) H16 when made 1905Boilers made at doBy whom made do when made 1905

Registered Horse Power

Owners William Lawden & CoPort belonging to LiverpoolNom. Horse Power as per Section 28 249Is Refrigerating Machinery fitted for cargo purposes NoIs Electric Light fitted No

## ENGINES, &amp;c.—Description of Engines

Triple ExpansionNo. of Cylinders 3No. of Cranks 3Dia. of Cylinders 21-36-59Length of Stroke 39"Revs. per minute 65

Dia. of Screw shaft

as per rule 12 1/2Material of SteelIs 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'-3"

Dia. of Tunnel shaft

as per rule 10-6 3/4as fitted 11 1/16

Dia. of Crank shaft journals

as per rule 11-16as fitted 11 3/8Dia. of Crank pin 11 1/2Size of Crank webs 7 1/2

Dia. of thrust shaft under

collars 12 1/2Dia. of screw 15-9Pitch of screw 15-9No. of blades 4State whether moveable NoTotal surface 75 sqNo. of Feed pumps 2Diameter of ditto 3 1/2Stroke 21"Can one be overhauled while the other is at work YesNo. of Bilge pumps 2Diameter of ditto 4"Stroke 21"Can one be overhauled while the other is at work YesNo. of Donkey Engines 3

SIZES OF PUMPS

8x10x8, 5x3x2 1/2, 8x6x4

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room

4-3"In Holds, &c. No 152 holds 2-3"No. of bilge injections 1sizes 5 1/2Connected to condenser, or to circulating pump YesIs a separate donkey suction fitted in Engine room & size Yes 3"Are all the bilge suction pipes fitted with roses YesAre 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 YesAre they Valves or Cocks BothAre they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates YesAre the discharge pipes above or below the deep water line AboveAre they each fitted with a discharge valve always accessible on the plating of the vessel YesAre the blow off cocks fitted with a spigot and brass covering plate YesWhat pipes are carried through the bunkers none

How are they protected

Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times YesAre the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges YesWhen were stern tube, propeller, screw shaft, and all connections examined in dry dock Before launchIs the screw shaft tunnel watertight YesIs it fitted with a watertight door Yesworked from Top gratingBOILERS, &c.—No. of Certificate 7595 (Letter for record 15)Total Heating Surface of Boilers 4014Is forced draft fitted NoNo. and Description of Boilers Two Single EndedWorking Pressure 180 lbTested by hydraulic pressure to 360 lbDate of test 12/7/05Can each boiler be worked separately YesArea of fire grate in each boiler 53.6 sq

No. and Description of safety valves to

each boiler 2 Spring loadedArea of each valve 5.9 sqPressure to which they are adjusted 185 lbAre they fitted with easing gear YesSmallest distance between boilers or uptakes and bunkers or woodwork 9"Mean dia. of boilers 14-0"Length 10-6"Material of shell plates SteelThickness 1 1/8"Range of tensile strength 28 1/2Are they welded or flanged noDescrip. of riveting: cir. seams D. R. L.long. seams A. B. S.Diameter of rivet holes in long. seams 1 3/16Pitch of rivets 8 3/8"Lap of plates on width of butt straps 17 3/4"

Per centages of strength of longitudinal joint

rivets 87.5plate 85.8Working pressure of shell by rules 180 lbSize of manhole in shell 18 x 12Size of compensating ring 2.7 x 2.3 x 1 1/2No. and Description of Furnaces in each boiler 3 DightonMaterial SteelOutside diameter 3-7 1/8

Length of plain part

top

Thickness of plates

crown 7 1/2Description of longitudinal joint weld

No. of strengthening rings

Working pressure of furnace by the rules 190Combustion chamber plates: Material SteelThickness: Sides 7/8"Back 3 1/32"Top 7/8"Bottom 3/4"Pitch of stays to ditto: Sides 6 1/2 x 8Back 9 1/2 x 9Top 10 x 6 1/2If stays are fitted with nuts or riveted heads NutsWorking pressure by rules 182 lbMaterial of stays SteelDiameter at smallest part 1 1/4"Area supported by each stay 65.9-82Working pressure by rules 180

End plates in steam space:

Material SteelThickness 1 3/16Pitch of stays 17 1/4 x 19 1/2How are stays secured D. R. L.Working pressure by rules 182 lbMaterial of stays SteelDiameter at smallest part 6-4"Area supported by each stay 360Working pressure by rules 180Material of Front plates at bottom SteelThickness 1"Material of Lower back plate SteelThickness 7/8"Greatest pitch of stays 14"Working pressure of plate by rules 195 lbDiameter of tubes 3 1/4"Pitch of tubes 4 3/8"Material of tube plates SteelThickness: Front 1"Back 7/8"Mean pitch of stays 11"Pitch across wide water spaces 14"Working pressures by rules 183 lbGirders to Chamber tops: Material Steel

Depth and

thickness of girder at centre 8 1/4 x 7 1/2Length as per rule 28"Distance apart 10"Number and pitch of Stays in each 3-6 1/2"Working pressure by rules 200Superheater 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

Lloyd's Register

Foundation

W574-0149



**DONKEY BOILER**— No. 1 Description *Cylindrical Multitubular*  
 Made at *Glasgow* By whom made *David Rowan & Co.* Date of test *12/7/05* Where fixed *Stokehold*  
 Working pressure *100* tested by hydraulic pressure to *200* No. of Certificate *7546* Fire grate area *26.3* Description of safety valves *Spring*  
 No. of safety valves *2* Area of each *4.9* Pressure to which they are adjusted *100 lb* If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No* Dia. of donkey boiler *9'-6"* Length *9'-0"* Material of shell plates *Steel* Thickness *7/8"* Range of tensile strength *24* Descrip. of riveting long. seams *T. R. L* Dia. of rivet holes *1 1/16"* Whether punched or drilled *drilled* Pitch of rivets *3 1/2"*  
 Lap of plating *6 1/2"* Per centage of strength of joint *80.4* Rivets *73.2* Thickness of shell crown plates *—* Radius of do. *—* No. of Stays to do. *—*  
 Dia. of stays. *—* Diameter of furnace *2'-8 3/4"* Bottom *—* Length of furnace *9'1"* Thickness of furnace plates *3/4"* Description of joint *weld* Thickness of furnace crown plates *—* Stayed by *—* Working pressure of shell by rules *103 lb*  
 Working pressure of furnace by rules *100 lb* Diameter of uptake *—* Thickness of uptake plates *—* Thickness of water tubes *—*

**SPARE GEAR.** State the articles supplied:— *Propeller, 2 top end bolts & nuts, 2 bottom end bolts & nuts, set of coupling bolts, 2 main bearing bolts, feed & butte valves, etc.*

The foregoing is a correct description,  
*David Rowan & Co.* Manufacturer.

Dates of Survey while building	During progress of work in shops—	<i>1904. Nov. 30. Dec. 7. 12 15. 21. 30. 1905. Jan. 9. 16. 23. Feb. 9. 15. Mar. 1. 2. 7. 11. 31. Apr.</i>
	During erection on board vessel—	<i>4. 6. 16. 27. May 5. June 12. 16. 29. July 12. Aug. 1. 11. Sept. 5. 6. 11. 23. Oct. 12. 16.</i>
	Total No. of visits	<i>22</i>

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

**General Remarks** (State quality of workmanship, opinions as to class, &c.)  
*The machinery & 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 for notation \* L M C 10.05 in the Register Book.*

It is submitted that  
 this vessel is eligible for  
 THE RECORD *L M C 10.05.*

*Wm. S.*  
*24.10.05*  
*25.10.05*

The amount of Entry Fee..	£	<i>2:</i>	When applied for, <i>20/10/05</i> When received, <i>23 OCT 1905</i>
Special .. .. .	£	<i>22. 9</i>	
Donkey Boiler Fee .. .. .	£	:	
Travelling Expenses (if any) £	:	:	

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

Committee's Minute *Glasgow 23 OCT 1905*

Assigned *+ L M C 10.05*

MACHINERY CERTIFICATE  
 WRITTEN 24/10/05

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