

# REPORT ON BOILERS.

No. 6998.

Received at London Office

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Date of writing Report *11<sup>th</sup> Oct. 1911* When handed in at Local Office *11<sup>th</sup> Oct. 1911* Port of *Belfast*

No. in Survey held at *Belfast* Date, First Survey *See other sheets* Last Survey *19*

Reg. Book. *42* on the *S.S. Galway Castle* (Number of Visits) Gross *4988* Tons Net *4985*

Master *T.H. McLaughlin* Built at *Belfast* By whom built *Harland & Wolff Ltd* When built *1911*

Engines made at *Belfast* By whom made *-* when made *-*

Boilers made at *-* By whom made *-* when made *-*

Registered Horse Power *Union Castle Mail S.S. Co. Ltd* Port belonging to *London*

## MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel *D. Colville & Sons Ltd*

Letter for record *S* Total Heating Surface of Boilers *2624 sq ft* As forced draft fitted *No* No. and Description of Boilers *1-Single End Cylinder* Working Pressure *220 lbs* Tested by hydraulic pressure to *440 lbs* Date of test *13-4-11*

No. of Certificate *443* Can each boiler be worked separately *Yes* Area of fire grate in each boiler *64 sq ft* No. and Description of Safety valves to each boiler *Two-Direct Springs* Area of each valve *5.41 sq in* Pressure to which they are adjusted *225 lbs*

Are they fitted with easing gear *Yes* In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler *Yes*

Smallest distance between boilers or uptakes and bunkers or woodwork *About 18"* Mean dia. of boilers *15'-8"* Length *11'-9"*

Material of shell plates *Steel* Thickness *1 1/2"* Range of tensile strength *30-34 tons* Are the shell plates welded or flanged *No*

Description of riveting: cir. seams *Lat. Double* Square seams *Butt* Diameter of rivet holes in long. seams *1 1/2"* Pitch of rivets *10 1/2"*

Width of butt straps *2 3/8"* Percentages of strength of longitudinal joint rivets *92%* Working pressure of shell by rules *250 lbs* Size of manhole in shell *16" x 12"* Size of compensating ring *McNeil's* No. and Description of Furnaces in each boiler *3-Suspension* Material *Steel* Outside diameter *50 1/2"* Length of plain part top *10'* Thickness of plates crown *3 1/4"* bottom *3 1/6"*

Description of longitudinal joint *Weld* No. of strengthening rings *4* Working pressure of furnace by the rules *246 lbs* Combustion chamber: Material *Steel* Thickness: Sides *3/2"* Back *3/2"* Top *3/2"* Bottom *1"* Pitch of stays to ditto: Sides *8" x 8"* Back *7 1/2" x 7 1/2"*

Top *8" x 8"* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *223 lbs* Material of stays *Steel* Diameter at smallest part *1 1/2" x 1 1/8"* Area supported by each stay *64 sq in* Working pressure by rules *247 lbs* Plates in steam space: Material *Steel* Thickness *1 1/2"*

Pitch of stays *16" x 16"* How are stays secured *Nuts & screwed into plates* Working pressure by rules *234 lbs* Material of stays *Steel* Diameter at smallest part *2 1/4"*

Area supported by each stay *256 sq in* Working pressure by rules *234 lbs* Material of Front plates at bottom *Steel* Thickness *1 1/2"* Material of lower back plate *Steel* Thickness *1 1/2"* Greatest pitch of stays *13"* Working pressure of plate by rules *205 lbs with 1/4 double*

Pitch of tubes *4" x 4"* Material of tube plates *Steel* Thickness: Front *3/2"* Back *3/2"* Mean pitch of stays *8" x 8"* Pitch across wide water spaces *13 1/2"* Working pressures by rules *268 lbs with 1/4 double* Girders to Chamber tops: Material *Steel* Depth and thickness of girder at centre *10 1/4" x (7/8" x 2)* Length as per rule *39"* Distance apart *8"* Number and pitch of Stays in each *4-8"*

Working pressure by rules *224 lbs* 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
<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>

Pitch of rivets	Working pressure of shell by rules	Diameter of flue	Material of flue plates	Thickness
<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>

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 *-*

The foregoing is a correct description, for *Harland & Wolff Ltd.* Manufacturer. *Robinning*

Dates: During progress of Survey *-* work in shops *-* while building *-* During erection on board vessel *-*

Is the approved plan of boiler forwarded herewith *Yes*

Total No. of visits *See other sheets*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *See other sheet*

Survey Fee ... £ *✓* : : } When applied for, ... 19...  
 Travelling Expenses (if any) £ : : } When received, ... 19...

*R. F. Pennington*  
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute *✓* TUE. OCT. 17. 1911



## List of Pumps

- |   |                        |  |
|---|------------------------|--|
| 2   | Main Feed              | $10\frac{1}{2}'' \times 7\frac{7}{8}'' \times 24''$        |
| 2   | Sanitary               | $10'' \times 4'' \times 10''$ Duplex                       |
| 1   | Main Aux. Feed         | $10\frac{1}{2}'' \times 7\frac{7}{8}'' \times 24''$ Single |
| 1   | Ballast                | $12'' \times 13'' \times 12''$                             |
| 1   | Fresh Water            | $3\frac{1}{2}'' \times 3'' \times 4''$ Duplex              |
| 1   | Evaporator Feed        | $3\frac{1}{2}'' \times 3'' \times 4''$                     |
| 1   | Brine                  | $3\frac{1}{2}'' \times 3'' \times 4''$                     |
| 2   | Main Centrifugal Pumps | 11 Pipes $\times$ $8\frac{1}{2}$ cycle $\times$ 7 stroke   |
| 1 Lugging Feed Heater, 2 Feed Filters, 1 Distiller, 1 Evaporator. |                        |  |

## Spare Gear

- 2 Bronze Propeller Blades
- 1 Pair Connecting rod brasses top end
- 1 - - - - - bottom
- 1 set H. P. piston rings, and 1 set M. P. rings
- 1 Air pump bucket with valves, guards, rod & nuts
- 1 - - - - - head valve
- Block packing rings for U. S. piston rod packing
- Set suction and delivery valves for lower <sup>duplex</sup> lift pump
- - - - - cold salt water
- - - - - hot
- 4 Propeller blade studs & nuts
- Set studs & nuts, guards & pins valves for air pump
- 1 Feed check valve & seat for boiler
- Several springs for each side steam & water spring
- Loaded valves on main & auxiliary & lock machinery
- Spare safety valve springs, etc. etc.
- and all gear to Lloyd's Rules additional



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