

REPORT ON BOILERS.

No. 6973.

Received at London Office
 Date of writing Report *8th Aug 11* When handed in at Local Office *10* Port of *Belfast*
 No. in Survey held at *Belfast* Date, First Survey *1st May 1910* Last Survey *4th Aug 1911*
 Reg. Book. *J.P.S. Demosthenes* (Number of Visits *18*) Gross *11223*
 on the *J.P.S. Demosthenes* Tons Net *7034*
 Master *Belfast* Built at *Belfast* By whom built *Harland & Wolff L^d* When built *1911*
 Engines made at *Belfast* By whom made *-* when made *-*
 Boilers made at *-* By whom made *-* when made *-*
 Registered Horse Power *-* Owners *G. Thompson & Co L^d* Port belonging to *Sherrin*

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel *D. Colville & Sons L^d*

(Letter for record *S*) Total Heating Surface of Boilers *2636 sq ft* Is forced draft fitted *Yes* No. and Description of Boilers *One, Single End Cylindrical* Working Pressure *215 lbs* Tested by hydraulic pressure to *430 lbs* Date of test *14-1-11*

No. of Certificate *440* Can each boiler be worked separately *✓* Area of fire grate in each boiler *59 sq ft* No. and Description of safety valves to each boiler *2 - Direct Spring* Area of each valve *8.29 sq in* Pressure to which they are adjusted *215 lbs*

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

Smallest distance between boilers or uptakes and bunkers or woodwork *about 18"* Mean dia. of boilers *15'-0"* Length *11'-3"*

Material of shell plates *Steel* Thickness *1 3/4"* Range of tensile strength *29-33 tons* Are the shell plates welded or flanged *No*

Descrip. of riveting: cir. seams *Tap White* Long. seams *Butt Lubbock* Diameter of rivet holes in long. seams *1 3/4"* Pitch of rivets *10 1/2"*

Gap of plates or width of butt straps *22 3/4"* Per centages of strength of longitudinal joint rivets *88.0* plate *85.0* Working pressure of shell by rules *250 lbs*

Size of manhole in shell *16" x 12"* Size of compensating rivet *McNeill* No. and Description of Furnaces in each boiler *3 - Morrison's* Material *Steel* Outside diameter *44 1/2"* Length of plain part *top 3"* Thickness of plates *crown 3 3/4"* bottom *6"*

Description of longitudinal joint *Weld* No. of strengthening rings *✓* Working pressure of furnace by the rule *238 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *3 1/2"* Back *3 1/2"* Top *3 1/2"* Bottom *1 1/2"* Pitch of stays to ditto: Side *8 1/2" x 7 1/2"* Back *8 1/2" x 7 1/2"*

Top *8 1/2" x 7 1/2"* If stays are fitted with nuts or riveted heads *Not riveted* Working pressure by rules *233 lbs* Material of stays *Steel* Diameter at smallest part *1 1/2"* 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 *17 1/2" x 15"* How are stays secured *Not riveted* Working pressure by rules *215 lbs* Material of stays *Steel* Diameter at smallest part *1 1/2" x 2 1/8"*

Area supported by each stay *260 sq in* Working pressure by rule *259 lbs* Material of Front plates at bottom *Steel* Thickness *7"* Material of Lower back plate *Steel* Thickness *7"* Greatest pitch of stays *12 1/2"* Working pressure of plate by rule *233 lbs* Diameter of tubes *2 1/2"*

Pitch of tubes *3 1/2" x 3 1/2"* Material of tube plate *Steel* Thickness: Front *7"* Back *1 1/2"* Mean pitch of stays *7 1/2" x 7 1/2"* Pitch across wide water spaces *13 1/4"* Working pressures by rule *348 lbs with 7" diameter* Girders to Chamber tops: Material *Iron* Depth and thickness of girder at centre *10" (8" x 2)* Length as per rule *32 1/2"* Distance apart *8 1/2"* Number and pitch of Stays in each *3 - 7 1/2"*

Working pressure by rules *234 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 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

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

Dates of Survey } During progress of work in shops - - -
 while building } During erection on board vessel - - -
See other sheet Is the approved plan of boiler forwarded herewith *Yes*
 Total No. of visits

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

Committee's Minute

TUE. AUG. 15. 1911

Assigned

See minute on Bel. Rpt 6973

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

A. J. Thomas



Lloyd's Register
 Foundation

List of Spare Gear

- 2 Pair connecting rod brasses, bottom end.
- 2 - - - - - H.P. Top
- 2 - - - - - L.P.
- 1 Air pump bucket and foot & head valve, seats of valves
- 1 Spindle & Impeller for Circulating pump.
- 1 H.P. valve spindle
- 1 L.P. valve spindle
- 1 Piston rings for H.P. M.P. & L.P.
- 50 Condenser tubes
- 6 Steel propeller blades
- 1 Green tin strap
- 1 Propeller shaft (wing)
- 2 Piston Rods
- Gear for Pumps, Auxiliary Pumps etc
- and gear to Lloyd's Rules Extra. ✓

List of Pumps

- | | | |
|---------------------|------------------------|------------------------|
| 2 Main Feed. Movers | 12 1/2" x 9 1/2" x 26" | |
| 1 Aux? | 4" x 5" x 12" | |
| 1 General | 10 1/2" x 7" x 12" | duplex |
| 1 Ash Detector | - | - |
| 1 Ballast | 12" x 12" x 12" | Waterman Watermain etc |
| 2 Sanitary | 8" x 6" x 8" | duplex |
| 1 F. Water | 5 1/2" x 4" x 3" | - |
| 1 Bells | 8" x 9" x 9" | - |
| 2 Refriger? | 8" x 9" x 10" | - |
| 2 Main Air | 13" x 20" x 16" | - |
| 1 Aux? | 12" x 18" x 10" | Single |
| 2 Main Circulating | 10" Centrif. | - |
| 1 Aux? | 6" | - |
| 1 Hotwell | 8" x 10" x 24" | G. Acting |



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