

# REPORT ON BOILERS.

No. 6973.

14. 1911

Received at London Office

Date of writing Report 8<sup>th</sup> Aug 11 When handed in at Local Office 10 Port of Belfast

No. in Survey held at Belfast Date, First Survey 1<sup>st</sup> May 1910 Last Survey 4<sup>th</sup> Aug 1911

Reg. Book. J.P.S. Demosthenes (Number of Visits 18) Gross 71223  
 on the J.P.S. Demosthenes Tons Net 7034

Master Belfast Built at Belfast By whom built Harland & Wolff L<sup>d</sup> When built 1911

Engines made at Belfast By whom made Harland & Wolff L<sup>d</sup> when made -

Boilers made at - By whom made - when made -

Registered Horse Power - Owners G. Thompson & Co L<sup>d</sup> Port belonging to Shedden

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY. Manufacturers of Steel D. Colville Sons L<sup>d</sup>

(Letter for record S) Total Heating Surface of Boilers 263624 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 Yes 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 Yes

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 89-83 Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams Lap Long. seams Butt Diameter of rivet holes in long. seams 1 3/4 Pitch of rivets 10 1/2

Width of butt straps 22 3/4 Per centages of strength of longitudinal joint rivets 88.0 Working pressure of shell by rules 250 lbs plate 85.0

Size of manhole in shell 16" x 12" Size of compensating rivets 1 1/2 No. and Description of Furnaces in each boiler 3 - Morrison's Material Steel Outside diameter 44 1/2 Length of plain part 3 Thickness of plates crown 3/4 bottom 5/8

Description of longitudinal joint Weld No. of strengthening rings 0 Working pressure of furnace by the rule 238 lbs Combustion chamber plates: Material Steel Thickness: Sides 3/2 Back 3/2 Top 3/2 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 Nuts inside Working pressure by rule 233 lbs Material of stays Steel Diameter at smallest part 1 1/2 Area supported by each stay 64 Working pressure by rule 247 lbs plates in steam space: Material Steel Thickness 1 1/2

Pitch of stays 17 1/2 x 15 How are stays secured Nuts inside Working pressure by rule 215 lbs Material of stay Steel Diameter at smallest part 2 1/2

Area supported by each stay 260 Working pressure by rule 259 lbs Material of Front plates at bottom Steel Thickness 7/8 Material of Lower back plate Steel Thickness 7/8 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 7/8 Back 1 1/8 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 7/8 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.

Is the approved plan of boiler forwarded herewith Yes

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

See other sheet

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

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

Committee's Minute TUE. AUG. 15. 1911

Assigned See minute on Bel. Rpt 6973



List of Spare Gear

- 2 Pair connecting rod brasses, bottom end.
  - 2 - - - - - H.P. Top
  - 2 - - - - - L.P.
  - 1 Air pump bucket rod, foot & head valve, seats of van.
  - 1 Spindle & Impeller for Circulating pump.
  - 1 H.P. valve spindle
  - 1 L.P.
  - 1 Piston rings for H.P. M.P. & L.P.
  - 50 Condenser tubes
  - 6 Steel propeller blades
  - 1 Eccentric Strap
  - 1 Propeller shaft (wing)
  - 2 Piston Rods
- Gear for Boilers, Auxiliary Pumps etc  
 & all 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 Ejector       | -                      | -                    |
| 1 Ballast           | 12" x 12" x 12"        | Water & Watering etc |
| 2 Sanitary          | 8" x 6" x 8"           | duplex               |
| 1 F. Water          | 5 1/2" x 4" x 5"       | -                    |
| 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"         | D. Acting            |



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