

Rpt. 5a.

## REPORT ON BOILERS.

No. 7307

TUE. DEC. 2 - 1913

Received at London Office  
 Date of writing Report 27<sup>th</sup> Nov 1913 When handed in at Local Office 27<sup>th</sup> Nov 1913 Port of Belfast  
 No. in Survey held at Belfast Date, First Survey 2<sup>nd</sup> Oct 1912 Last Survey 25<sup>th</sup> Nov 1913  
 Reg. Book. J.S.S. Cardiganshire (Number of Visits 95) Gross 9426  
 on the Tons Net 5993  
 Master G. E. Warner Built at Belfast By whom built Workman Clark & Co. Ltd When built 1913  
 Engines made at Belfast By whom made - when made -  
 Boilers made at - By whom made - when made -  
 Registered Horse Power - Owners Royal Mail Steam Packet Co. Port belonging to Belfast

## MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel Beardmore &amp; Co. Ltd

(Letter for record S) Total Heating Surface of Boilers 5000 sq ft forced draft fitted Yes No. and Description of  
 Boilers 2-Single End. Multi-Cylindrical Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 7-10-13

No. of Certificate 456 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 Two-Direct Spring Area of each valve 9.62 sq Pressure to which they are adjusted 200 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 14'-10 1/2" Length 11'-4 1/2"

Material of shell plates Steel Thickness 1 1/2" Range of tensile strength 28-32 Tons Are the shell plates welded or flanged No  
 Descrip. of riveting: cir. seams Lap. B & S. long. seams Butt. Beble Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 10 1/2"

of plates or width of butt straps 22 1/2" Per centages of strength of longitudinal joint rivets 83.5 Working pressure of shell by  
 rules 226 lbs Size of manhole in shell 16" x 12" Size of compensating No. and Description of Furnaces in each  
 boiler 3-Morrison's Material Steel Outside diameter 47 1/2" Length of plain part top 4" Thickness of plates crown 4 3/4"  
 bottom 8" bottom 6 1/4"

Description of longitudinal joint Weld No. of strengthening rings Working pressure of furnace by the rules 232 lbs Combustion chamber  
 plates: Material Steel Thickness: Sides 2 1/2" Back 4 1/4" - 5" Top 2 1/2" Bottom 1 5/8" Pitch of stays to ditto: Sides 8 1/2" x 8 3/4" Back 8 1/2" x 7 3/4"

Top 8" x 8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 211 lbs Material of stays Steel Diameter at  
 smallest part 1 1/2" Area supported by stay 69 sq Working pressure by rules 269 lbs Material of stays Steel Thickness 1 1/2"

Pitch of stays 18 1/2" x 14 1/2" How are stays secured Bolts & Nuts Working pressure by rules 224 lbs Material of stays Steel Diameter at smallest part 2 1/2"

Area supported by stay 235 1/2 sq Working pressure by rules 270 lbs Material of Front plates at bottom Steel Thickness 1" Material of  
 Lower back plate Steel Thickness 1 5/8" Greatest pitch of stays 15" Working pressure of plate by rules 212 lbs Diameter of tubes 2 1/2"

Pitch of tubes 3 1/2" x 3 5/8" Material of tube plate Steel Thickness: Front 1 3/4" Back 1 3/8" Mean pitch of stays 4 1/2" x 4 1/4" Pitch across wide  
 water spaces 13 1/2" Working pressures by rules 204 lbs Girders to Chamber tops: Material Steel Depth and thickness of  
 girder at centre 9 1/4" x (2 1/2" x 2) Length as per rule 34 1/2" Distance apart 8" Number and pitch of Stays in each 3-8"

Working pressure by rules 216 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 WORKMAN, CLARK & CO., LIMITED

M. A. Bell

Manufacturer.

Is the approved plan of boiler forwarded herewith

Yes returned 3/10/13.

Total No. of visits

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

See other sheet

## GENERAL REMARKS (State quality of workmanship, opinions as to class, &amp;c.)

See other sheet

Survey Fee ... £ : : When applied for, ✓ 19

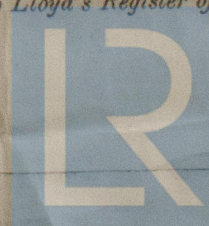
Travelling Expenses (if any) £ : : When received, 19

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

Committee's Minute FRI. DEC. 5 - 1913

Assigned 20 Minute on

Ret. Rpt 7307 attached



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## Donkey Pumps

1	Ballast	Wheeler	8" x 10" x 10"
1	Sanitary	-	6" x 7" x 8"
1	General	-	9" x 6" x 10"
2	Wear Feed		13 1/2" x 10" x 26"
1	Fresh Water		5" x 5" x 8"
2	Leaving Trough		

## Spare Gear

- 1/3 Crank Shaft
  - 1 Propeller Shaft
  - 2 - Valves
  - 1 Piston Rod & nut
  - 2 Valve spindles
  - 1 Eccentric pulley, strap rod
  - 1 Air pump bucket rod
  - 50 Main condenser tubes
  - 1 Centrifugal pump impeller spindle
  - 1 Pair crank pin bushes
  - 2 - Crosshead
  - 1 - Main bearing
  - 1 Set piston rings for one engine etc.
- and all gear to Lloyd's Rules extra.

Rpt. 13.

Port of

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Reg. Book

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