

REPORT ON BOILERS.

No. 26923
THU. MAR 1-1917

Received at London Office

Date of writing Report 17-2-1917 When handed in at Local Office 27 FEB 1917 Port of Sunderland
 No. in Survey held at Sunderland Date, First Survey see Machinery report Last Survey 16-2-1917
 Reg. Book. 59 on the donkey boiler of the new steel turbine " S/S LORD BYRON" (Number of Visits ✓) Gross 3250 Tons Net 1935
 Master Robertson Built at Sunderland By whom built W. Doxford & Sons Ltd (N° 478) When built 1917
 Engines made at Newcastle By whom made Parsons Marine Steam Turbine Co (N° 55) When made 1910
 Boilers made at Sunderland By whom made W. Doxford & Sons Ltd (N° 478) When made 1917
 Registered Horse Power _____ Owners Byron & Co. Port belonging to London

MULTITUBULAR BOILERS—~~MAIN, AUXILIARY OR~~ DONKEY.—Manufacturers of Steel John Spence & Sons Ltd

(Letter for record (5)) Total Heating Surface of Boilers 10270" Is forced draft fitted no No. and Description of Boilers one single ended marine Working Pressure 100 Tested by hydraulic pressure to 200 Date of test 21-10-16
 No. of Certificate 3367 Can each boiler be worked separately ✓ Area of fire grate in each boiler 294" No. and Description of safety valves to each boiler two, direct spring Area of each valve 5.940" Pressure to which they are adjusted 105
 Are they fitted with easing gear yes In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler no
 Smallest distance between boilers or uptakes and bunkers on woodwork 18" Mean dia. of boilers 11'-0" Length 10'-0"
 Material of shell plates steel Thickness 1 1/2" Range of tensile strength 28 tons min Are the shell plates welded or flanged no
 Descrip. of riveting: cir. seams W.R long. seams DBS.WR Diameter of rivet holes in long. seams 2 1/2" Pitch of rivets 4 5/16"
 Lap of plates or width of butt straps 8 3/8" Per centages of strength of longitudinal joint: rivets 83.5 plate 81.9 Working pressure of shell by rules 102 Size of manhole in shell 16x12" Size of compensating ring 8 1/2 x 5 1/8" No. and Description of Furnaces in each boiler two plain Material steel Outside diameter 3'-4" Length of plain part: top 75" bottom 69" Thickness of plates: crown 9 1/16" bottom 9 1/16"
 Description of longitudinal joint welded No. of strengthening rings none Working pressure of furnace by the rules 113 Combustion chamber plates: Material steel Thickness: Sides 1/2" Back 3 5/64" Top 1/2" Bottom 9/16" Pitch of stays to ditto: Sides 8 1/4 x 9 1/8" Back 9 3/8 x 9 3/8"
 Top 8 1/4 x 8 1/2" If stays are fitted with nuts or riveted heads nutbolts Working pressure by rules 101 Material of stays steel Diameter, at smallest part .99 Area supported by each stay 75.30" Working pressure by rules 105 End plates in steam space: Material steel Thickness 2 5/32"
 Pitch of stays 17 x 16 1/2" How are stays secured DN & wash Working pressure by rules 103 Material of stays steel Diameter, at smallest part 2.36
 Area supported by each stay 280 Working pressure by rules 103 Material of Front plates at bottom steel Thickness 9/8" Material of Lower back plate steel Thickness 7/8" Greatest pitch of stays 12 1/8 x 9 1/8" Working pressure of plate by rules 106 Diameter of tubes 3/4"
 Pitch of tubes 4 3/8 x 4 1/2" Material of tube plates steel Thickness: Front 2 1/32" Back 1 1/8" Mean pitch of stays 13 3/8" Pitch across wide water spaces 14" Working pressures by rules 111 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 2 @ 5 1/4 x 7 1/4" Length as per rule 27" Distance apart 8 1/2" Number and pitch of Stays in each 2 @ 8 1/4"
 Working pressure by rules 102 Superheater 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 _____

WILLIAM DOXFORD & SONS, Limited
 The foregoing is a correct description,
W. Doxford Manufacturer.
Director

Dates of Survey: During progress of work in shops - - - }
 while building board vessel - - - } (see Machinery report attached) Total No. of visits ✓
 Is the approved plan of boiler forwarded herewith Yes ✓

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
The materials and workmanship are good.
The boiler has been constructed under special survey, satisfactorily fixed in the stokehold and its safety valves adjusted under steam, adjusting washers - P 7/16 S 3/8"

Survey Fee £ 2 : 2 : } When applied for, 27 FEB 1917
 Travelling Expenses (if any) £ : : } When received, 3.3.1917

W. Davis
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute FRI - 2 MAR 1917

Assigned