

REPORT ON BOILERS.

Received at London Office **WED. 1 JAN 1908**
SAT. 1 FEB 1908

Date of writing Report 19 When handed in at Local Office 19 Port of Middlesbrough
 No. in Survey held at Middlesbrough Date, First Survey August 30th Last Survey 9th Feb 1908
 Reg. Book. Main Boiler No 3189, for 'Ardent' (Number of Visits 17) Tons } Gross
 on the Main Boiler No 3189, for 'Ardent' } Net
 Master Goolle Built at Goolle By whom built Goolle S.B. Co. Ltd. 112 When built 1907
 Engines made at _____ By whom made _____ when made _____
 Boilers made at Middlesbrough By whom made Richardsons Westgarth & Co Ltd when made 1907
 Registered Horse Power 70. Owners _____ Port belonging to _____

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY—Manufacturers of Steel Clyde Bridge Steel Co Ltd

(Letter for record (7)) Total Heating Surface of Boilers 1227 sq ft Is forced draft fitted no No. and Description of Boilers One Cyl. Multi single ended Working Pressure 180 lb Tested by hydraulic pressure to 360 lb Date of test 16, 12, 07

No. of Certificate 4066 Can each boiler be worked separately yes Area of fire grate in each boiler 374 sq ft No. and Description of safety valves to each boiler two direct Spring Area of each valve 4.9 sq in Pressure to which they are adjusted 185 lb

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 10" Int'l Mean dia. of boilers 12'-6" Length 10'-6"

Material of shell plates Steel Thickness 1 3/16" Range of tensile strength 28/32 Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams D.R.S. long. seams J.R.D.B.S. Diameter of rivet holes in long. seams 1 7/16" Pitch of rivets 3 3/16" 2 rows

Lap of plates or width of butt straps 16 1/4" x 1 5/16" inner Per centages of strength of longitudinal joint rivets 88 Working pressure of shell by rules 184 Size of manhole in shell 12" x 16" Size of compensating ring 8 1/2" x 3 3/4" No. and Description of Furnaces in each boiler 2 plain Material Steel Outside diameter 3'-6 1/4" Length of plain part top 6'-3" Thickness of plates crown 49" bottom 64"

Description of longitudinal joint welded No. of strengthening rings yes Working pressure of furnace by the rules 183 Combustion chamber plates: Material Steel Thickness: Sides 1 1/16" Back 1 1/16" Top 1 1/16" Bottom 1 3/16" Pitch of stays to ditto: Sides 9 3/4" x 9" Back 10 1/2" x 8" Top 9 3/4" x 9 3/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 181 Material of stays Steel Diameter at smallest part 2.096" Area supported by each stay 8.4 sq in Working pressure by rules 186 End plates in steam space: Material Steel Thickness 1 3/16"

Pitch of stays 19 x 19 How are stays secured D.R.W. Working pressure by rules 185 Material of stays Steel Diameter at smallest part 4.9" Area supported by each stay 2.72 sq in Working pressure by rules 180 Material of Front plates at bottom Steel Thickness 1" Material of Lower back plate Steel Thickness 1 5/16" Greatest pitch of stays 16.5" x 8" Working pressure of plate by rules 182 Diameter of tubes 3 1/2"

Pitch of tubes 5" x 5" Material of tube plates Steel Thickness: Front 1" Back 3/4" Mean pitch of stays 10" Pitch across wide water spaces 14 1/2" Working pressures by rules 182 Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 9 1/2" x 1 3/4" Length as per rule 2'-9" Distance apart 9 1/4" Number and pitch of Stays in each 2 9 3/4"

Working pressure by rules 236 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 _____

The foregoing is a correct description,
RICHARDSONS, WESTGARTH & Co. Ltd. Manufacturer.

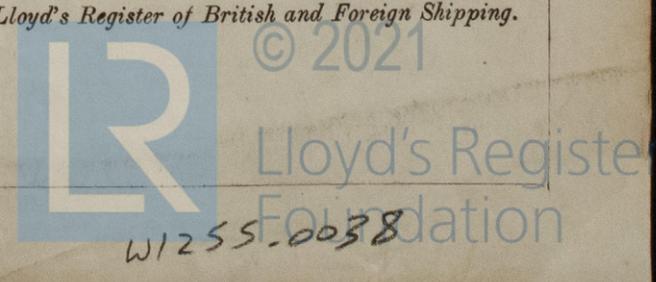
Dates of Survey } During progress of } 1907 Aug 30, Sep 1, 2, 24, Oct 9, 16, Nov 9, 14, 21, 27, Dec 4, 16 } Is the approved plan of boiler forwarded herewith yes
 while building } During erection on } Nov Feb 3, 4, 5, 7, 9. } Total No. of visits 17.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under Special Survey. The materials and workmanship are good. The boiler fitted up on board. Tested under steam and found satisfactory.

Special Survey Fee ... £ 3 : 10 : } When applied for, 8. 1. 1908
 Travelling Expenses (if any) £ : : } When received, 10. 1. 1908
 R.D. Shilston
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute FRI. 13 MAR 1908

Assigned Send Hull



If not a member of the Society, and when one shall be sent

Is a Report also sent on the Hull of the Ship?

[1 m. 7. 7.—Copyright Ink.]

W1255-0038