

# REPORT ON BOILERS.

No. 25658  
WED. APR. 23. 1913

Received at London Office

Date of writing Report 19.4.13 When handed in at Local Office Port of Sunderland  
 No. in Survey held at Sunderland Date, First Survey 22 August Last Survey 15 April 1913  
 Reg. Book. on the Donkey Boiler for S/S Bingle Bank (Number of Visits) Gross 3730 Tons Net 1940  
 Master Herr Built at Sunderland By whom built John Blume & Co (S/N 216) When built 1913  
 Engines made at Sunderland By whom made John Dickinson & Sons Ltd (N 755) When made 1913  
 Donkey Boilers made at Sunderland By whom made Mac Coll & Pollock Ltd (N 623) When made 1912  
 Registered Horse Power \_\_\_\_\_ Owners Stewart & Hobbs Ltd Port belonging to Liverpool

## MULTITUBULAR BOILERS ~~MAIN, PORTER OR~~ DONKEY.—Manufacturers of Steel John Spencer & Sons Ltd

(Letter for record (S)) Total Heating Surface of Boilers 569 sq ft 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 6.12.12  
 No. of Certificate 3069 Can each boiler be worked separately yes Area of fire grate in each boiler 21 sq ft No. and Description of safety valves to each boiler two Spring Area of each valve 3.97 sq in 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 or woodwork 15 in Im Mean dia. of boilers 9-0 Length 9-0  
 Material of shell plates steel Thickness 19/32 Range of tensile strength 28 1/2-32 Are the shell plates welded or flanged no  
 Descrip. of riveting: cir. seams SR long. seams lap DR Diameter of rivet holes in long. seams 1 in Pitch of rivets 3 1/4 in  
 Lap of plates on middle of butt straps 5 in Per centages of strength of longitudinal joint rivets 69.2 Working pressure of shell by rules 100 Size of manhole in shell 16 x 12 in Size of compensating ring 6 x 23/32 in plate 69.2 No. and Description of Furnaces in each boiler 2 plain Material steel Outside diameter 2-8 1/2 in Length of plain part 5-9 in Thickness of plates crown 1 1/2 in bottom 1 1/2 in  
 Description of longitudinal joint welded No. of strengthening rings none Working pressure of furnace by the rules 110 Combustion chamber plates: Material steel Thickness: Sides 1 1/2 in Back 1/2 in Top 1 1/2 in Bottom 1/8 in Pitch of stays to ditto: Sides 10 x 7 in Back 9 x 8 1/2 in  
 Top 7 x 10 1/2 in If stays are fitted with nuts or riveted heads nuts Working pressure by rules 108 Material of stays steel area Diameter at smallest part 1.02 in Area supported by each stay 73.30 in Working pressure by rules 109 End plates in steam space: Material steel Thickness 23/32 in  
 Pitch of stays 17 1/2 x 12 1/2 in How are stays secured W.N. Working pressure by rules 104 Material of stays steel Diameter at smallest part 2.16 in  
 Area supported by each stay 215.50 in Working pressure by rules 104 Material of Front plates at bottom steel Thickness 23/32 in Material of Lower back plate steel Thickness 23/32 in Greatest pitch of stays 14 1/2 x 8 1/4 in Working pressure of plate by rules 155 Diameter of tubes 3 1/4 in  
 Pitch of tubes 4 3/4 x 4 1/2 in Material of tube plates steel Thickness: Front 23/32 in Back 5/8 in Mean pitch of stays 11 7/8 in Pitch across wide water spaces 13 3/8 in Working pressures by rules 103 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 2 @ 5 1/2 x 3/4 in Length as per rule 22 1/2 in Distance apart 10 1/2 in Number and pitch of Stays in each 2 @ 7 in  
 Working pressure by rules 106 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,  
**MAC COLL & POLLOCK LTD**  
Manufacturer.

Dates of Survey: During progress of work in shops - 1912 Aug 22, Sep 9, Oct 4, 16, 30, Nov 4, 21, 29 Is the approved plan of boiler forwarded to Director yes  
 while building: During erection on board vessel - Dec 3.6, Apr. 3.15 Total No. of visits 12

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

The materials and workmanship are good.  
 The boiler has been made under special survey.  
 Secured in place examined under steam and safety valves adjusted to 105 lbs

Survey Fee ... £ 2 : 2 : } When applied for, 21.4.1913  
 Travelling Expenses (if any) £ : : } When received, 1913

Committee's Minute FRI. APR. 25. 1913  
 Assigned see Minute on Sld. Rpt. 25658

Lewis Stewart  
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

