

# REPORT ON BOILERS.

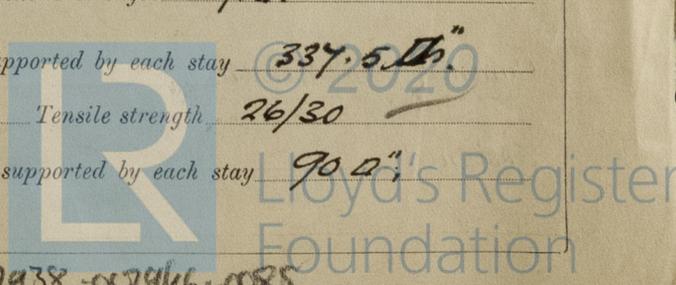
Received at London Office

17 MAY 1930

Date of writing Report 1930 When handed in at Local Office 16<sup>th</sup> May 1930 Port of Belfast  
 No. in Survey Reg. Book 192 Date, First Survey 1928 Last Survey 1928  
 on the Sc MV. "IRISBANK" (Number of Visits 1) Gross Tons 192 Net Tons 192  
 Master John Built at Belfast By whom built Workman, Black (1928) Ltd. Yard No. 510 When built 1930  
 Engines made at Belfast By whom made Workman, Black (1928) Ltd. Engine No. 510 When made 1930  
 Boilers made at Belfast By whom made Workman, Black (1928) Ltd. Boiler No. 510 When made 1930  
 Nominal Horse Power 1246 Owners Bank Line Ltd. Port belonging to Belfast

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Baldwins Ltd. (Letter for Record         )  
 Total Heating Surface of Boilers 1607 Is forced draught fitted No. Coal or Oil fired oil  
 No. and Description of Boiler One, S.E. Mult Working Pressure 120 lbs.  
 Tested by hydraulic pressure to 230 lbs. Date of test 9/12/29 No. of Certificate 941 Can each boiler be worked separately ✓  
 Area of Firegrate in each Boiler ✓ No. and Description of safety valves to each boiler Two, Cockburn high lift.  
 Area of each set of valves per boiler per Rule 8.9" as fitted 9.8" Pressure to which they are adjusted 120 lbs. Are they fitted with easing gear yes.  
 In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No main boilers.  
 Smallest distance between boilers or uptakes and bunkers or woodwork 24" Is oil fuel carried in the double bottom under boilers yes.  
 Smallest distance between shell of boiler and tank top plating 2'-6" Is the bottom of the boiler insulated yes.  
 Largest internal dia. of boilers 13'-0" Length 10'-6" Shell plates: Material Steel. Tensile strength 28/32.  
 Thickness 25/32. Are the shell plates welded or flanged No. Description of riveting: circ. seams end Double.  
 long. seams Double riveted. Double butt straps. Diameter of rivet holes in circ. seams 1 1/8" long. seams 2 1/8" Pitch of rivets 5-5/16" 5-3/16"  
 Percentage of strength of circ. end seams plate 70.5. rivets 50.2. Percentage of strength of circ. intermediate seam plate rivets ✓  
 Percentage of strength of longitudinal joint plate 81.3. rivets 84.7. combined 90.5. Working pressure of shell by Rules 122 lbs.  
 Thickness of butt straps outer 2 1/32" inner 2 5/32" No. and Description of Furnaces in each Boiler Three - Deighton.  
 Material Steel. Tensile strength 26/30 Smallest outside diameter 37 1/2"  
 Length of plain part top ✓ bottom ✓ Thickness of plates crown 1 1/16" bottom 2 1/16" Description of longitudinal joint Welded.  
 Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 164 lbs.  
 End plates in steam space: Material Steel. Tensile strength 26/30. Thickness 1" Pitch of stays 18 3/4" x 18"  
 How are stays secured Double nuts. Working pressure by Rules 136 lbs.  
 Tube plates: Material front } Steel. back } Tensile strength 26/30. Thickness 1 1/8" 3/4"  
 Mean pitch of stay tubes in nests 14" Pitch across wide water spaces 14" Working pressure front 141. back 250.3.  
 Girders to combustion chamber tops: Material Steel. Tensile strength 28/32. Depth and thickness of girder  
 at centre 7" x 1 1/2" Length as per Rule 31 3/16" Distance apart 10" No. and pitch of stays  
 in each 2-9" Working pressure by Rules 128.7 lbs. Combustion chamber plates: Material Steel.  
 Tensile strength 26/30. Thickness: Sides 1 1/32" Back 9/16" Top 1 1/32" Bottom 1 1/32"  
 Pitch of stays to ditto: Sides 9 1/2 x 9" Back 9 1/2 x 9 1/4" Top 10 x 9" Are stays fitted with nuts or riveted over nuts.  
 Working pressure by Rules 134 lbs. Front plate at bottom: Material Steel. Tensile strength 26/30.  
 Thickness 1 1/8" Lower back plate: Material Steel. Tensile strength 26/30. Thickness 1 1/16"  
 Pitch of stays at wide water space 13 7/8" x 9 1/4" Are stays fitted with nuts or riveted over nuts.  
 Working Pressure 152 lbs. Main stays: Material Steel. Tensile strength 28/32.  
 Diameter At body of stay, 2 3/4" Over threads 2 3/4" No. of threads per inch six Area supported by each stay 337.5 lbs.  
 Working pressure by Rules 164 lbs. Screw stays: Material Steel. Tensile strength 26/30  
 Diameter At turned off part, 1 1/2" Over threads 1 1/2" No. of threads per inch 9 Area supported by each stay 90 lbs.



Working pressure by Rules *139 lbs.* Are the stays drilled at the outer ends *No.* Margin stays: Diameter *1 5/8"*  
 No. of threads per inch *9.* Area supported by each stay *104.6 sq. in.* Working pressure by Rules *145 lbs.*  
 Tubes: Material *Iron.* External diameter *3"* Thickness *8 SWG. / 5/16"* No. of threads per inch *9*  
 Pitch of tubes *4 1/4"* Working pressure by Rules *250 lbs.* Manhole compensation: Size of opening in  
 shell plate *16" x 12" 19 x 15* Section of compensating ring *28 15/16" x 31 x 1 3/4"* No. of rivets and diameter of rivet holes *44 - 31/32"*  
 Outer row rivet pitch at ends *5 3/4"* Depth of flange if manhole flanged *3 1/4"* Steam Dome: Material  
 Tensile strength Thickness of shell Description of longitudinal joint  
 Diameter of rivet holes Pitch of rivets Percentage of strength of joint  
 Internal diameter Working pressure by Rules Thickness of crown No. and diameter of  
 stays Inner radius of crown Working pressure by Rules  
 How connected to shell Size of doubling plate under dome Diameter of rivet holes and pitch  
 of rivets in outer row in dome connection to shell

Type of Superheater Manufacturers of Tubes  
 Number of elements Material of tubes Internal diameter and thickness of tubes  
 Material of headers Tensile strength Thickness Can the superheater be shut off and  
 the boiler be worked separately Is a safety valve fitted to every part of the superheater which can be shut off from the boiler  
 Area of each safety valve Are the safety valves fitted with easing gear Working pressure as per  
 Rules Pressure to which the safety valves are adjusted Hydraulic test pressure:  
 tubes, castings and after assembly in place Are drain cocks or valves fitted  
 to free the superheater from water where necessary

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with *yes.*

The foregoing is a correct description,  
 FOR WORKMAN CLARK (1923) LIMITED.

*J. Cunningham* Secretary  
 Manufacturer.

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

Are the approved plans of boiler and superheater forwarded herewith  
 (If not state date of approval.)

Total No. of visits

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

*This boiler was constructed under special survey to an approved design. The materials and workmanship are good. The boiler was subjected to hydraulic test in accordance with the Rules and was efficiently fastened on board the vessel. The safety valves were adjusted to 120 lbs sq. under steam.*

Survey Fee ... .. £ *10 : 14 : 0* When applied for, *12<sup>th</sup> May 1930*  
 Travelling Expenses (if any) £ : : When received, *27.5.30*

*John K. Williams.*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 28 MAY 1930*

Assigned *See F.E. Rpt.*



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