

15 AUG 1930

Received at London Office

Date of writing Report 192 When handed in at Local Office 14th Aug 1930. Port of Belfast. Included in R. 8. report.

No. in Survey held at Belfast. Date, First Survey Last Survey 192

Reg. Book. 86096 on the Steel Tarn Sc. "TAYBANK."

(Number of Visits) Gross 5630. Tons Net 3440.

Master Built at Belfast. By whom built Workman, Clark (1928) Ltd. Yard No. 512. When built 1930.

Engines made at Belfast. By whom made Workman, Clark (1928) Ltd. Engine No. 512. When made 1930.

Boilers made at Belfast. By whom made Workman, Clark (1928) Ltd. Boiler No. 512. When made 1930.

Nominal Horse Power 1246. Owners Bank Line Ltd. Port belonging to Belfast.

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Baldwin & Co. Ltd. (Letter for Record S)

Total Heating Surface of Boilers 1607. Is forced draught fitted No. Coal or Oil fired oil.

No. and Description of Boilers One S.E. Multitubular. Working Pressure 120 lbs.

Tested by hydraulic pressure to 230 lbs. Date of test 25/4/30. No. of Certificate 947. Can each boiler be worked separately ✓

Area of Firegrate in each Boiler ✓ No. and Description of safety valves to each boiler Two Lockdowns High Lift. ✓

Area of each set of valves per boiler (per Rule 8.90" as fitted 9.80" 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 1/2" long. seams 3/2" Pitch of rivets 3.5/8" 5 3/16" ✓

Percentage of strength of circ. end seams (plate 70.5. rivets 50.2. Percentage of strength of circ. intermediate seam (plate 81.3. rivets 84.7. combined 90.5. Working pressure of shell by Rules 122 lbs. ✓

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 1/2" inner 2 1/2" 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 16" bottom 16" Thickness of plates (crown 1 1/2" bottom 1 1/2" 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. Tensile strength } 26/30. Thickness } 3/8" 3/4" ✓

Mean pitch of stay tubes in nests 14". Pitch across wide water spaces 14". Working pressure (front 141 lbs. back 125 lbs. ✓

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 19/32. Back 9/16. Top 19/32. Bottom 19/32. ✓

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 1/8". ✓

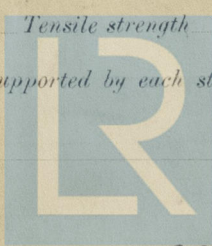
Pitch of stays at wide water space 13 7/8 x 9 1/4". Are stays fitted with nuts or riveted over nuts. ✓

Working Pressure 152 lbs. Main stays: Material Steel. Tensile strength 28/32. ✓

Diameter (At body of stay, or Over threads 2 3/4". No. of threads per inch 6. Area supported by each stay 337.50". ✓

Working pressure by Rules 164 lbs. Screw stays: Material Steel. Tensile strength 26/30. ✓

Diameter (At turned off part, or Over threads 1 1/2". No. of threads per inch 9. Area supported by each stay 900". ✓



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Working pressure by Rules 139 lbs. sq. in. Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, 1 5/8" or Over threads 1 3/8"

No. of threads per inch 9 Area supported by each stay 104.6 sq. in. Working pressure by Rules 145 lbs. sq. in.

Tubes: Material Iron External diameter { Plain 3" Stay 3" Thickness { 8 SWG 5" 16 No. of threads per inch 9

Pitch of tubes 4 1/4" Working pressure by Rules 250 lbs. sq. in. Manhole compensation: Size of opening in shell plate (16 x 12") 19" x 15" Section of compensating ring 28 15/16" x 31" x 13/16" No. of rivets and diameter of rivet holes 44 - 31/32"

Outer row rivet pitch at ends 5 3/16" 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 { Plate Rivets

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

Number of elements Material of tubes Manufacturers of { Tubes Steel castings

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 22 inclusive for boilers been complied with Yes.

The foregoing is a correct description,
FOR WORKMAN CLARK (1928) LIMITED. Manufacturer.
J. Cunningham Secretary.

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. in. under steam.

Survey Fee ... £ 10 : 14 : 0 When applied for, 14th Aug 1930.
 Travelling Expenses (if any) £ : : When received, 23. 8. 1930

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

Committee's Minute FRI. 22 AUG 1930
 Assigned See F. E.