

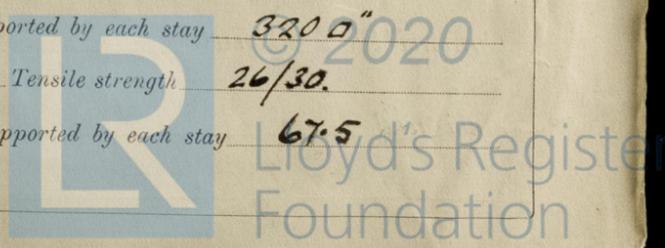
REPORT ON BOILERS.

Received at London Office 29 APR 1930

Date of writing Report 192 When handed in at Local Office 28th April 1930 Port of Belfast.
 No. in Reg. Book. Survey held at Belfast. Date, First Survey See Y. & Mch. report. Last Survey 192
 on the Steamer "CEFALU." (Number of Visits) Gross Tons Net
 Master Built at Belfast. By whom built Workman, Clark (1928) Ltd. Yard No. 514. When built 1930.
 Engines made at Belfast. By whom made Workman, Clark (1928) Ltd. Engine No. 514. When made 1930.
 Boilers made at Belfast. By whom made Workman, Clark (1928) Ltd. Boiler No. 514. When made 1930.
 Nominal Horse Power 867. Owners Standard Fruit & SS. Corp. Port belonging to Ceiba.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel David Colville & Sons Ltd, Baldwins Ltd, Scottish Iron & Steel Co Ltd (Letter for Record S)
 Total Heating Surface of Boilers 13,300 sq. ft. Is forced draught fitted Yes. Coal or Oil fired oil.
 No. and Description of Boilers Four, single ended multi. Working Pressure 260 lbs.
 Tested by hydraulic pressure to 440. Date of test 11/2/30. No. of Certificate 945. Can each boiler be worked separately Yes.
 Area of Firegrate in each Boiler 50% of 15.11. No. and Description of safety valves to each boiler Two, Cockburn Improved High Lift.
 Area of each set of valves per boiler as fitted 9.816. Pressure to which they are adjusted 260 lbs. 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 15". Is oil fuel carried in the double bottom under boilers No.
 Smallest distance between shell of boiler and tank top plating 22". Is the bottom of the boiler insulated Yes.
 Largest internal dia. of boilers 16'-3". Length 12'-6". Shell plates: Material Steel. Tensile strength 31/35.
 Thickness 1 3/4". Are the shell plates welded or flanged No. Description of riveting: circ. seams {end Double, inter. }
 long. seams Triple. Diameter of rivet holes in {circ. seams 1 3/4", long. seams 1 1/4". } Pitch of rivets { 4-1207, 11". }
 Percentage of strength of circ. end seams {plate 57.5, rivets 49.3. } Percentage of strength of circ. intermediate seam {plate, rivets }
 Percentage of strength of longitudinal joint {plate 84.09, rivets 86.9, combined 85.48. } Working pressure of shell by Rules 262.5.
 Thickness of butt straps {outer 1 3/8", inner 1 1/2". } No. and Description of Furnaces in each Boiler Four, Deighton section. 4 ft.
 Material Steel. Tensile strength 26/30. Smallest outside diameter 41 15/32".
 Length of plain part {top, bottom } Thickness of plates {crown 4 1/2", bottom 64". } Description of longitudinal joint Welded.
 Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 260.4.
 End plates in steam space: Material Steel. Tensile strength 26/30. Thickness 1 3/8". Pitch of stays 20"x16".
 How are stays secured Double nuts. Working pressure by Rules 270.6.
 Tube plates: Material {front Steel, back Steel. } Tensile strength { 26/30. } Thickness { 1 3/32", 7/8". }
 Mean pitch of stay tubes in nests 9 1/8". Pitch across wide water spaces 13 1/2". Working pressure {front 274 lbs., back 265". }
 Girders to combustion chamber tops: Material Steel. Tensile strength 28/32. Depth and thickness of girder
 at centre 11 3/8" x 1 5/8". Length as per Rule 38 27/64". Distance apart 8 5/8". No. and pitch of stays
 in each 4 - 7". Working pressure by Rules 266.3 lbs.
 Tensile strength 26/30. Thickness: Sides 33/32". Back 45/64". Top 73/32". Bottom 39/32".
 Pitch of stays to ditto: Sides 9x6 1/4", 7 1/4" x 8 1/2". Back 8 5/8" x 7 5/8". Top 8 5/8" x 7". Are stays fitted with nuts or riveted over Yes.
 Working pressure by Rules 261.6. Front plate at bottom: Material Steel. Tensile strength 26/30.
 Thickness 1 3/32". Lower back plate: Material Steel. Tensile strength 26/30. Thickness 15/16".
 Pitch of stays at wide water space 13 3/4" - 15". Are stays fitted with nuts or riveted over Yes.
 Working Pressure 282.6. Main stays: Material Steel. Tensile strength 28/32.
 Diameter {At body of stay, or Over threads } 3 3/4". No. of threads per inch 6. Area supported by each stay 320 sq. in.
 Working pressure by Rules 273.4. Screw stays: Material Steel. Tensile strength 26/30.
 Diameter {At turned off part, or Over threads } 1 3/4", 1 1/2". No. of threads per inch 9. Area supported by each stay 67.5 sq. in.



Working pressure by Rules 268.8 Are the stays drilled at the outer ends yes Margin stays: Diameter ^{At turned off part.} 2" - 1 7/8"
 No. of threads per inch 9 Area supported by each stay 90.10" Working pressure by Rules 275
 Tubes: Material Iron External diameter ^{Plain} 2 1/2" ^{Stay} 2 1/2" - 2 3/8" Thickness ^{SWG} 3/16" - 3/8" No. of threads per inch 9
 Pitch of tubes 3 1/4" x 3 1/2" Working pressure by Rules 300 lbs sq" Manhole compensation: Size of opening in
 shell plate 19 1/4" x 15 1/4" Section of compensating ring 38 1/4" x 36" x 1 5/8" No. of rivets and diameter of rivet holes 36 - 1 3/4"
 Outer row rivet pitch at ends 11" Depth of flange if manhole flanged 3 1/4" Steam Dome: Material None
 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 None Manufacturers of ^{Tubes} ^{Steel castings}
 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.

Manufacturer.

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

Dates of Survey ^{During progress of} ^{work in shops - -}
 while building ^{During erection on} ^{board vessel - -}

Total No. of visits

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers were constructed under Special Survey to an approved design. The materials and workmanship are good. They were subjected to hydraulic test in accordance with the Rules and were efficiently fastened on board the vessel. The safety valves were adjusted to 200 lbs sq" under steam.

Survey Fee £ See machinery Report. When applied for, 192
 Travelling Expenses (if any) £ : : When received, 192

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

Committee's Minute File 9 MAY 1930

Assigned See F. E. Rpt.



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