

REPORT ON BOILERS.

No. 13900

Received at London Office -6 DEC 1929

Date of writing Report 5. 12. 1929 When handed in at Local Office 5. 12. 1929 Port of MIDDLESBROUGH.

No. in Survey held at STOCKTON. Date, First Survey 7 June Last Survey 4. 12. 1929.
 (Number of Visits 3) Gross 4576
 489 Sup. on the S. "GLOFIELD" Tons Net 2765

Master Built at Thornaby on Tees By whom built Craig Taylor & Co. Yard No. 226 When built 1929
 Engines made at Stockton By whom made Blair & Co (1926) Ltd Engine No. 1984 When made 1929
 Boilers made at do. By whom made do. Boiler No. 1984 When made 1929
 Nominal Horse Power Owners Globe Shipping Co. Ltd Port belonging to Cardiff.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Dunlop & Co. (Letter for Record S.)
 Total Heating Surface of Boilers 7080 sq. ft. Is forced draught fitted no. Coal or Oil fired coal
 No. and Description of Boilers 3 S.B. Working Pressure 180 lbs.
 Tested by hydraulic pressure to 320 lbs. Date of test 16. 10. 29 No. of Certificate 6745 Can each boiler be worked separately Ye.
 Area of Firegrate in each Boiler 48 sq. ft. No. and Description of safety valves to each boiler Pair Cockburns J. H. L.
 Area of each set of valves per boiler (per Rule 7.56 sq. ft. as fitted 7.95 sq. ft. Pressure to which they are adjusted 185 lbs. Are they fitted with easing gear Ye.
 In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler ✓
 Smallest distance between boiler uptakes and bunkers 5'-0" Is oil fuel carried in the double bottom under boilers no
 Smallest distance between shell of boiler and tank top plating 3'-0" Is the bottom of the boiler insulated Ye.
 Largest internal dia. of boilers 15'-3 9/16" Length 11'-0" Shell plates: Material steel Tensile strength 29/33 ✓
 Thickness 1 7/32" Are the shell plates welded or flanged no. Description of riveting: circ. seams end DR ✓
 Long. seams T.R.D.B.S. (5 rivets) Diameter of rivet holes in (circ. seams 1 1/4" long. seams 1 1/4" Pitch of rivets 3.67" 8 3/4"
 Percentage of strength of circ. end seams (plate 65.9 rivets 43.6 Percentage of strength of circ. intermediate seam (plate 85.7 rivets 85.8 combined 88.5 Working pressure of shell by Rules 182 lbs.
 Thickness of butt straps (inter 15" inner 1 1/16" No. and Description of Furnaces in each Boiler 3 C.F. ✓
 Material steel Tensile strength 26/30. Smallest outside diameter 3'-7 1/8" ✓
 Length of plain part (top 9" bottom 7" Thickness of plates (crown 9/16" bottom 7/16" Description of longitudinal joint weld ✓
 Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 189 lbs.
 End plates in steam space: Material steel Tensile strength 26/30. Thickness 1 7/32" Pitch of stays 20" x 19 1/2" ✓
 How are stays secured D.N. & W. ✓ Working pressure by Rules 214 lbs.
 Tube plates: Material (front steel back steel Tensile strength 26/30. Thickness 1 1/16" 13/16" 185 lbs. front 262 lbs. back
 Mean pitch of stay tubes in nests 10 27/32" Pitch across wide water spaces 14 1/2" x 9 3/4" Working pressure (front 185 lbs. back 262 lbs.)
 Girders to combustion chamber tops: Material steel Tensile strength 28/32. Depth and thickness of girder
 At centre 8" x 13/16" (double) Length as per Rule 2'-5" Distance apart 9 1/2" No. and pitch of stays
 In each 2-9" Working pressure by Rules 224 lbs. Combustion chamber plates: Material steel
 Tensile strength 26/30. Thickness: Sides 11/16" Back 11/16" Top 11/16" Bottom 7/8"
 Pitch of stays to ditto: Sides 10 1/4" x 8 3/8" Back 9 3/8" x 9 3/8" Top 9" x 9 1/2" Are stays fitted with nuts or riveted over nuts ✓
 Working pressure by Rules 188 lbs. Front plate at bottom: Material steel Tensile strength 26/30. Thickness 1 1/16" 15/16"
 Lower back plate: Material steel Tensile strength 26/30. Thickness 1 1/16"
 Pitch of stays at wide water space 14" x 9 3/8" Are stays fitted with nuts or riveted over nuts ✓
 Working Pressure 254 lbs. Main stays: Material steel Tensile strength 28/32.
 Diameter (At body of stay, 3 1/4" No. of threads per inch 6. Area supported by each stay 400 sq. in.
 Working pressure by Rules 201 lbs. Screw stays: Material steel Tensile strength 26/30. 2021
 Diameter (At turned off part, 1 3/4" No. of threads per inch 8. Area supported by each stay 85.5 sq. in.
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Working pressure by Rules 209 lbs. Are the stays drilled at the outer ends no. Margin stays: Diameter ^{At turned off part,} 1 7/8" or Over threads 1 7/8"

No. of threads per inch 8. Area supported by each stay 100.4 Working pressure by Rules 207 lbs.

Tubes: Material iron External diameter ^{Plain} 3 1/2" to 3 3/8" Thickness 8 w.g. No. of threads per inch 9

Pitch of tubes 4 7/8" x 4 3/4" Working pressure by Rules p. 215 lbs. S. 201 lbs. Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 8" x 1 7/32" No. of rivets and diameter of rivet holes 28 - 1 3/8"

Outer row rivet pitch at ends 9 1/2" Depth of flange if manhole flanged ✓ 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 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 22 inclusive for boilers been complied with Yes

The foregoing is a correct description,
For BLAIR & CO. (1926) LIMITED.

J. J. Chambers Manufacturer.
SECRETARY.

Dates of Survey ^{During progress of work in shops - - -} See machinery rpt. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes

^{During erection on board vessel - - -}

Total No. of visits

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

The materials and workmanship are good. These boilers have been built under special survey in accordance with the Rules and Approved Plan, securely fitted aboard and their safety valves adjusted and tested under steam with satisfactory results.

Survey Fee ... See Machinery Report When applied for, 192

Travelling Expenses (if any) £ When received, 192

P. J. Mac
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 31 DEC 1929

FRI. 3 JAN 1930

Assigned

See Machinery Report attached



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