

REPORT ON BOILERS.

No. 44133

Received at London Office 12 NOV 1924

Date of writing Report 3rd Nov. 1924 When handed in at Local Office 4-11-1924 Port of Glasgow

No. in Survey held at Glasgow. Date, First Survey 31. 7. 24 Last Survey 31. 10. 1924

Reg. Book. on the Main Boiler for s/s. 'TURQUOISE' (Number of Visits 16) Tons { Gross Net

Master Built at Troon By whom built Aitch Shipbuilding & Co. Yard No. 391 When built

Engines made at Troon By whom made Aitch Shipbuilding & Co. Engine No. 126 When made

Boilers made at Glasgow By whom made The Firth S.B. & E. Co. (1911) Ltd Boiler No. 1821 When made 1924

Nominal Horse Power Owners Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel The Steel Co. of Scotland Ltd. (Letter for Record S. ✓)

Total Heating Surface of Boilers 1627.5 Is forced draught fitted Coal or Oil fired

No. and Description of Boilers One Cyl. Mult. Single End. 15B. ✓ Working Pressure 180 lb. ✓

Tested by hydraulic pressure to 320 lb. Date of test 31. 10. 24 No. of Certificate 16644 Can each boiler be worked separately

Area of Firegrate in each Boiler 50.5 ✓ No. and Description of safety valves to each boiler

Area of each set of valves per boiler { per Rule as fitted Pressure to which they are adjusted Are they fitted with easing gear

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler ✓

Smallest distance between boilers or uptakes and bunkers or woodwork Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated

Largest internal dia. of boilers 13'-6" ✓ Length 10'-6" ✓ Shell plates: Material S. ✓ Tensile strength 28/32 T. ✓

Thickness 1 1/8" Are the shell plates welded or flanged 40. ✓ Description of riveting: circ. seams { end 2.0.R. inter. 3.625

Long. seams D.B.S./T.R. ✓ Diameter of rivet holes in { circ. seams 13/16" long. seams 13/16" ✓ Pitch of rivets { 3.625 8.125 ✓

Percentage of strength of circ. end seams { plate 67.1 rivets 43.1 Percentage of strength of circ. intermediate seam { plate rivets ✓

Percentage of strength of longitudinal joint { plate 85.19 rivets 85.37 combined 90.6 Working pressure of shell by Rules 181 lb. ✓

Thickness of butt straps { outer 7/8" inner 1" No. and Description of Furnaces in each Boiler 3 Brighton ✓

Material S. ✓ Tensile strength 26/30 T. ✓ Smallest outside diameter 41 1/16" ✓

Length of plain part { top bottom ✓ Thickness of plates { crown 17/32" bottom 17/32" ✓ Description of longitudinal joint Weld ✓

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 186 lb. ✓

End plates in steam space: Material S. ✓ Tensile strength 26/30 T. ✓ Thickness 13/32" ✓ Pitch of stays 18x17" ✓

How are stays secured D.N. ✓ Working pressure by Rules 183 lb. ✓

Tube plates: Material { front S ✓ back S ✓ Tensile strength { 26/30 T. ✓ 26/30 T. ✓ Thickness { 13/16" + 7/8" D.N. ✓ 25/32" ✓

Mean pitch of stay tubes in nests 11 7/8" x 8 3/4" Pitch across wide water spaces 14 1/2" Working pressure { front 298 back 209

Girders to combustion chamber tops: Material S. ✓ Tensile strength 28/32 T. ✓ Depth and thickness of girder

At centre 9' x 17/8" ✓ Length as per Rule 33 1/16" ✓ Distance apart 9" ✓ No. and pitch of stays

In each 3 @ 8" ✓ Working pressure by Rules 212 lb. ✓ Combustion chamber plates: Material S. ✓

Tensile strength 26/30 T. ✓ Thickness: Sides 2 1/32" ✓ Back 2 1/32" ✓ Top 2 1/32" ✓ Bottom 3/4" ✓

Pitch of stays to ditto: Sides 10' x 8" ✓ Back 10' x 8" ✓ Top 9' x 8" ✓ Are stays fitted with nuts or riveted over Nut ✓

Working pressure by Rules 183 lb. ✓ Front plate at bottom: Material S. ✓ Tensile strength 26/30 T. ✓

Thickness 13/16" ✓ Lower back plate: Material S. ✓ Tensile strength 26/30 T. ✓ Thickness 27/32" ✓

Pitch of stays at wide water space 14 3/8" x 8" ✓ Are stays fitted with nuts or riveted over Nut ✓

Working Pressure 212 lb. Main stays: Material S. ✓ Tensile strength 28/32 T. ✓

Diameter { At body of stay 2 1/2" ✓ or 2 3/4" ✓ No. of threads per inch 8 ✓ Area supported by each stay 306 sq. in. ✓

Working pressure by Rules 186 lb. ✓ Screw stays: Material S. ✓ Tensile strength 26/30 T. ✓

Diameter { At turned off part 1 5/8" ✓ or 1 7/8" ✓ No. of threads per inch 9 ✓ Area supported by each stay 80 sq. in. ✓

Working pressure by Rules 1884 Are the stays drilled at the outer ends 20 Margin stays: Diameter { At turned off part, 7/8 or Over threads 1 1/4 }
No. of threads per inch 9 Area supported by each stay 97.49 Working pressure by Rules 1864
Tubes; Material I External diameter { Plain 3 1/2 Stay 3 1/2 } Thickness { 5/16 1/8 } No. of threads per inch 9
Pitch of tubes 1 7/8 x 8 3/4 Working pressure by Rules 2154 Manhole compensation: Size of opening in
shell plate 18 3/4 x 14 3/4 Section of compensating ring 9 x 1 1/8 x 2 No. of rivets and diameter of rivet holes 40 - 1 1/16
Outer row rivet pitch at ends 8 7/16 Depth of flange if manhole flanged - 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 _____ 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 _____

Annual Survey Request

The foregoing is a correct description,
FOR THE FORTH SHIPBUILDING & ENGINEERING CO. (1921)

(LINDSAY BURNET'S BOILER WORKS) Manufacturer.

Dates of Survey { During progress of work in shops - - } 1924 July 31 Aug 7-13-18-21 Sep 3-11-15-22
while building { During erection on board vessel - - } Oct 3-9-13-20-13-27-31
Are the approved plans of boiler and superheater forwarded herewith Yes
(If not state date of approval.)
Total No. of visits 16

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This Boiler has been
constructed under special survey in accordance with the Rules and
approved plan. The materials and workmanship employed in its manufacture
are sound and good.
It will be fitted on board the Vessel at Troon

Survey Fee £ 10 : 16 : 0 When applied for, 11/11/1924
Travelling Expenses (if any) £ : : When received, 11/11/1924

W. Lane

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 11 NOV 1924

Assigned TRANSMIT TO LONDON



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Lloyd's Register
Foundation

Fee ()
To

3m, 424 T.