

REPORT ON BOILERS.

No. 66375

Received at London Office

10 DEC 1942

11 JUL 1941

Date of writing Report 1.12.42 When handed in at Local Office Glasgow Port of Glasgow
 No. in Survey held at Reg. Book. Glasgow Date, First Survey 16-12-41 Last Survey 7-9-42
 on the EMPIRE FALISMAN (Number of Visits 36) Tons {Gross / Net
 Master 7 Built at Port Glasgow By whom built Lithgow Limited Yard No. 997 When built 1944
 Engine No. SAS667 When made
 By whom made
 Boilers made at Glasgow By whom made Fairfield S.B. & Co. Ltd. Boiler No. A/71 When made 1942
 Port belonging to
 Nominal Horse Power

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Company of Scotland Ltd (Letter for Record (S))
 Total Heating Surface of Boilers 5920 sq ft Is forced draught fitted yes Coal or Oil fired coal Working Pressure 220
 No. and Description of Boilers Two single ended marine
 Tested by hydraulic pressure to 380 Date of test 28-8-42 No. of Certificate 21170 Can each boiler be worked separately yes
 Area of Firegrate in each Boiler 66.6 sq ft No. and Description of safety valves to each boiler one 3/4" ordinary double spring
 Area of each set of valves per boiler {per Rule 15.750" / as fitted 16.590" Pressure to which they are adjusted Are they fitted with easing gear yes

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 16'-1 29/64" Length 12'-0" Shell plates: Material S Tensile strength 29-33 tons
 Thickness 1 35/64" Are the shell plates welded or flanged no Description of riveting: circ. seams {end DR lap / inter. -
 long. seams D.B.S.T.R. Diameter of rivet holes in {circ. seams F 1 3/8" B 1 1/16" / long. seams 1 9/16" Pitch of rivets {F 3-4" B 4-1 9/16" / 10 13/16"
 Percentage of strength of circ. end seams {plate F 60. B 62.7 / rivets F 44.7 B 47 Percentage of strength of circ. intermediate seam {plate - / rivets -
 Percentage of strength of longitudinal joint {plate 85.5 / rivets 85.26 / combined 88.13 Working pressure of shell by Rules -

Thickness of butt straps {outer 1 11/64" / inner 1 19/64" No. and Description of Furnaces in each Boiler Four Deighton Smallest outside diameter 3-5 1/4"
 Material S Tensile strength 26-30 tons Description of longitudinal joint welded
 Length of plain part {top - / bottom - Thickness of plates {crown 5/8" / bottom - Working pressure of furnace by Rules -
 Dimensions of stiffening rings on furnace or c.c. bottom - Tensile strength 26-30 tons Thickness 1 13/32" Pitch of stays 22 1/2" x 17 3/4"
 End plates in steam space: Material S Tensile strength 26-30 tons Working pressure by Rules -
 How are stays secured WN Tensile strength {26-30 tons / Thickness {15/16" / 25/32"
 Tube plates: Material {front S / back S Tensile strength {26-30 tons / Working pressure {front - / back -
 Mean pitch of stay tubes in nests 9 1/2" Pitch across wide water spaces 14" Working pressure {front - / back -

Girders to combustion chamber tops: Material S Tensile strength 28-32 tons Depth and thickness of girder
 at centre 2 @ 10" x 7/8" Length as per Rule 36 9/16" Distance apart 9 3/8" No. and pitch of stays
 in each 3 @ 8 3/4" Working pressure by Rules - Combustion chamber plates: Material S
 Tensile strength 26-30 tons Thickness: Sides 25/32" Back 21/32" Top 25/32" Bottom 25/32"
 Pitch of stays to ditto: Sides 9 3/8" x 8 3/4" Back 8 1/2" x 8" Top 9 3/8" x 8 3/4" Are stays fitted with nuts or riveted over nuts
 Working pressure by Rules - Front plate at bottom: Material S Tensile strength 26-30 tons
 Thickness 15/16" Lower back plate: Material S Tensile strength 26-30 tons Thickness 53/64"
 Pitch of stays at wide water space 13 1/2" Are stays fitted with nuts or riveted over nuts
 Working Pressure - Main stays: Material S Tensile strength 28-32 tons

Shipping. Diameter {At body of stay, 3/4" / 3 1/2" / Swelled ends No. of threads per inch 6 Area supported by each stay -
 Working pressure by Rules Screw stays: Material S Tensile strength 26-30 tons
 Diameter {At turned off part, 1 7/8" / 1 3/4" / 1 7/8" / 2 1/4" / No. of threads per inch 9 Area supported by each stay -

Working pressure by Rules - Are the stays drilled at the outer ends Margin stays: Diameter ^{At turned off part,} _{or} ^{Over threads} 1 3/4" - 1 7/8"

No. of threads per inch 9 Area supported by each stay - Working pressure by Rules -

Tubes: Material S External diameter ^{Plain} 3" ^{Stay} 3" Thickness 8 w.s. No. of threads per inch 9

Pitch of tubes 4 3/16" x 4 7/8" Working pressure by Rules - Manhole compensation: Size of opening in end shell plate 16" x 12" Section of compensating ring - No. of rivets and diameter of rivet holes -

Outer row rivet pitch at ends Depth of flange if manhole flanged 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 forgings} _{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 forgings and 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

The foregoing is a correct description,
 For The FAIRFIELD SHIPBUILDING & ENGINEERING Co. Ltd.,
 G. R. Shachan Joint Managing Director Manufacturer.

Dates of Survey while building: During progress of work in shops - 1941 Dec 16-18, 22; 1942 Jan 9-19, 27, 30, Feb 9-11, 14, 18, 21, 26, 28, Mar 2-6, 11-15, 27, Apr 10-14, 17-24, 27, 30, May 1-8, 11-15, 18, 21, 24, 27, 30, June 1-3, 7, 10, 13, 17, 21, 24, 27, July 3-24, 28, Aug 6-15, 18, 21, 24, 27.

Are the approved plans of boiler and superheater forwarded herewith 9-10-40 (If not state date of approval.)

Total No. of visits 36

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. (LITHGOWS LTD 957) Esb Rpt. No 64241

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

The workmanship and materials are good.

The boilers have been constructed under special survey and in accordance with the D.M.S.R. specification.

30-11-42 The boilers have been stored at the makers works since completion. They have now been sent to James Watt Works Greenock to await allocation.

Gib
 1/12/42

Survey Fee ... £40 : 5 :
 + 25% specification fee
 Travelling Expenses (if any) £ : :
 When applied for, 8 DEC 1942
 When received, 19

Sh Davis
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 8 DEC 1942

Assigned Referred for completion

