

REPORT ON BOILERS.

No. 46124

Received at London Office 17 NOV 1926

Date of writing Report Novⁿ 8th 1926 When handed in at Local Office Novⁿ 13th 1926 Port of GLASGOW.No. in Reg. Book. Survey held at Glasgow Date, First Survey 23rd Apr Last Survey Novⁿ 8th 1926

on the S.E. Marine Boiler S/S PORTWAY (Number of Visits 6) Tons { Gross ✓ Net ✓

Master Built at Bristol By whom built Chas. Hurston Yard No. 159 When built 1927

Engines made at Southampton By whom made Day Lunn & Co. Ltd. Engine No. 360 When made 1920

Boilers made at Glasgow By whom made A & W. Dalglish Boiler No. 839 When made 1926

Nominal Horse Power 54. Owners J.R. Brown & Co. Port belonging to Bristol

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Messrs D. Colville and Sons Ltd. (Letter for Record S ✓)

Total Heating Surface of Boilers 1053. sq ft Is forced draught fitted No Coal or Oil fired CoalNo. and Description of Boilers One S.E. Marine ✓ Working Pressure 130 lbs sq in

Tested by hydraulic pressure to 245 lbs Date of test 8-11-26 No. of Certificate 14230 Can each boiler be worked separately ✓

Area of Firegrate in each Boiler 40 sq ft No. and Description of safety valves to each boiler Two spring loaded

Area of each set of valves per boiler { per Rule 9.07 as fitted 9.8 Pressure to which they are adjusted 135 lbs 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 12" 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 11'-0" Length 10'-0" Shell plates: Material S Tensile strength 28-32 tons

Thickness $\frac{11}{16}$ " Are the shell plates welded or flanged No Description of riveting: circ. seams { end DR Lap ✓ inter. -long. seams T.R. DBS Diameter of rivet holes in { circ. seams $\frac{1}{16}$ " long. seams $\frac{13}{16}$ " Pitch of rivets { $3\frac{1}{4}$ " $5\frac{13}{32}$ " ✓

Percentage of strength of circ. end seams { plate 64.3 rivets 65.1 Percentage of strength of circ. intermediate seam { plate - rivets -

Percentage of strength of longitudinal joint { plate 84.94 rivets 85.9 Working pressure of shell by Rules 131 lbs sq in Thickness of butt straps { outer $\frac{9}{16}$ " inner $\frac{21}{32}$ " No. and Description of Furnaces in each Boiler Two Plain ✓

Material S Tensile strength 26-30 tons Smallest outside diameter 3'-4" ✓

Length of plain part { top $6'-4\frac{5}{8}"$ bottom $4'-0\frac{1}{16}"$ Thickness of plates { crown $\frac{43}{64}$ " bottom $\frac{43}{64}$ " Description of longitudinal joint Weld ✓

Dimensions of stiffening rings on furnace or c.c. bottom None Working pressure of furnace by Rules 130 lbs

End plates in steam space: Material S Tensile strength 26-30 tons Thickness $\frac{13}{16}$ " Pitch of stays 15" x 14" ✓

How are stays secured Double Nut ✓ Working pressure by Rules 142 lbs

Tube plates: Material { front S back S Tensile strength { 26-30 tons Thickness { $\frac{13}{16}$ " $\frac{21}{32}$ " ✓Mean pitch of stay tubes in nests $10\frac{3}{32}$ " Pitch across wide water spaces 14" Working pressure { front 165 lbs back 149 lbs

Girders to combustion chamber tops: Material S Tensile strength 28-32 tons Depth and thickness of girder

at centre $6\frac{3}{4}$ " @ 1" Length as per Rule 2'-2 $\frac{25}{32}$ " Distance apart 8" No. and pitch of staysin each 2 @ $8\frac{1}{4}"$ Working pressure by Rules 136 lbs Combustion chamber plates: Material S ✓Tensile strength 26-30 tons Thickness: Sides $\frac{17}{32}$ " Back $\frac{9}{16}$ " Top $\frac{17}{32}$ " Bottom $\frac{4}{8}"$ ✓Pitch of stays to ditto: Sides $8\frac{1}{4}"$ x $8\frac{1}{4}"$ Back 9" x $8\frac{1}{2}"$ Top $8\frac{1}{4}"$ x 8" Are stays fitted with nuts or riveted over Nuts ✓

Working pressure by Rules 141 lbs Front plate at bottom: Material S Tensile strength 26-30 tons

Thickness $\frac{13}{16}"$ Lower back plate: Material S Tensile strength 26-30 tons Thickness $\frac{13}{16}"$ ✓

Pitch of stays at wide water space 13" Are stays fitted with nuts or riveted over Nuts ✓

Working Pressure 182 lbs Main stays: Material S Tensile strength 28-32 tons ✓

Diameter { At body of stay, 2 $\frac{1}{8}"$ ✓ No. of threads per inch 6 Area supported by each stay 210 sq in ✓

Working pressure by Rules 144 lbs Screw stays: Material S Tensile strength 26-30 tons ✓

Diameter { At turned off part, 1 $\frac{3}{8}"$ ✓ No. of threads per inch 9 Area supported by each stay 46.5 sq in ✓

Working pressure by Rules 132 lbs Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, 1 1/2" or Over threads. 1 1/2" No. of threads per inch 9. Area supported by each stay 93.5 sq. in. Working pressure by Rules 134 lbs Tubes: Material L.W. Iron External diameter { Plain 3 3/4" Stay 3 1/4" Thickness { 9 W.C. 5/16" No. of threads per inch 9. Pitch of tubes 4 3/8" x 4 3/8" Working pressure by Rules 180 lbs Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 28" x 24" x 1/16" No. of rivets and diameter of rivet holes 32 @ 1 5/16" Outer row rivet pitch at ends 6" 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 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

The foregoing is a correct description,

A. R. H. Dalrymple Manufacturers

Dates of Survey { During progress of work in shops - - 1926 Apr 23 May 10 26 June 1 15 Are the approved plans of boiler and superheater forwarded herewith Yes while building { During erection on board vessel - - - Nov 8 Total No. of visits 6

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

The boiler has been constructed under Special Survey in accordance with the approved plan and Rules of the Society. The workmanship and materials are of good quality. The boiler is intended for vessel N° 159 building at yard of C. Hill and Sons Bristol

This boiler has now been fitted & secured a train the 7. Porting, which under steam found in run

Survey Fee ... £ 4 : 0 : 0 When applied for, 192

Travelling Expenses (if any) £ : : When received, 192

MONTHLY ACCOUNT

John W. Gwynne
David C Barr

Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 12 AUG 1927

Committee's Minute GLASGOW 16 NOV 1926

Assigned TRANSMIT TO LONDON

FRI. 27 MAY 1927

TUES. 13 SEP 1927

TUES. 6 DEC 1927

TUES. 12 JUN 1928

TUE. 19 MAR 1929