

## REPORT ON BOILERS.

No. 43157

Received at London Office WFO. 21 NOV. 1923

Date of writing Report 192 When handed in at Local Office 19-11-1923 Port of Glasgow.

No. in Survey held at Dalminie Date, First Survey 2nd July Last Survey 19 October 1923

Reg. Book. on the Steel Marine Boiler. J. WHEATPLAIN (Number of Visits 15) Tons {Gross 522.64 Net 199.08}

Master Built at Appledore By whom built Hansen & Co. Yard No. 10 When built 1924

Engines made at Coatbridge By whom made H. Bennamore & Co. Engine No. 594 When made 1924

Boilers made at Dalminie By whom made H. Bennamore & Co. Boiler No. N360 When made 1923

Nominal Horse Power Owners Messrs. Fuller & Baker Port belonging to Carruff

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel H. Bennamore & Co. (Letter for Record S)

Total Heating Surface of Boilers 2005 ft<sup>2</sup> Is forced draught fitted No Coal or Oil fired coal

No. and Description of Boilers one single ended cylindrical multitubular Working Pressure 130 lbs

Tested by hydraulic pressure to 260 lbs Date of test 19/10/23 No. of Certificate 16359 Can each boiler be worked separately ✓

Area of Firegrate in each Boiler 61 ft<sup>2</sup> No. and Description of safety valves to each boiler 2 Spring loaded

Area of each set of valves per boiler {per Rule 17.2 ft<sup>2</sup> as fitted 38 ft<sup>2</sup> 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 No

Smallest distance between boilers or uptakes and bunkers or woodwork 5'-0 Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated No

Largest internal dia. of boilers 14'6" Length 10'6" Shell plates: Material Steel Tensile strength 28/32 tons

Thickness 29/32" Are the shell plates welded or flanged No Description of riveting: circ. seams {end double inter. 2.986" long. seams 7"

Percentage of strength of circ. end seams {plate 66.5 rivets 47.5 Percentage of strength of circ. intermediate seam {plate 85.7 rivets 95.07

Percentage of strength of longitudinal joint {plate 95.07 rivets 90.4 Working pressure of shell by Rules 135 lbs

Thickness of butt straps {outer 11/16" inner 13/16" No. and Description of Furnaces in each Boiler 3 Plain

Material Steel Tensile strength 26/30 tons Smallest outside diameter 44"

Length of plain part {top 6'6" bottom 6'6" Thickness of plates {crown 11/16" bottom 11/16" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom 3 1/2" x 3 1/2" x 1/16" Working pressure of furnace by Rules 142 lbs

End plates in steam space: Material Steel Tensile strength 26/30 tons Thickness 1/32" Pitch of stays 19" x 19"

How are stays secured Nuts Working pressure by Rules 136 lbs

Tube plates: Material {front Steel back Steel Tensile strength {26/30 tons Thickness {3/4" x 5/8" doubling 3/4"

Mean pitch of stay tubes in nests 14 1/4" x 9 1/2" Pitch across wide water spaces 14 1/2" Working pressure {front 130 lbs back 142 lbs

Girders to combustion chamber tops: Material Steel Tensile strength 28/32 tons Depth and thickness of girder at centre 7 3/4" x 1 1/4" Length as per Rule 29 7/8" Distance apart 9 3/4" No. and pitch of stays in each 2 of 9" Working pressure by Rules 133 lbs Combustion chamber plates: Material Steel

Tensile strength 26/31 tons Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 5/8"

Pitch of stays to ditto: Sides 9" x 9 1/2" Back 9 1/2" x 9 1/2" Top 9" x 9 3/4" Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules 150 lbs Front plate at bottom: Material Steel Tensile strength 26/30 tons

Thickness 3/4" Lower back plate: Material Steel Tensile strength 26/30 tons Thickness 3/4"

Pitch of stays at wide water space 14 1/2" Are stays fitted with nuts or riveted over Nuts

Working Pressure 151 lbs Main stays: Material Steel Tensile strength 28/32 tons

Diameter {At body of stay 2 5/8" No. of threads per inch 6 Area supported by each stay 361 in<sup>2</sup>

Over threads 2 5/8" Working pressure by Rules 137 lbs Screw stays: Material Steel Tensile strength 26/30 tons

Diameter {At turned off part 1 1/2" No. of threads per inch 9 Area supported by each stay 90 in<sup>2</sup>



Working pressure by Rules 139 1/2 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 5/8" or Over threads 1 5/8"  
No. of threads per inch 9 Area supported by each stay 114" Working pressure by Rules 133 1/2.  
Tubes; Material Iron External diameter { Plain 3 1/2" Thickness { 9 L.S.G. No. of threads per inch 9  
Pitch of tubes 4 3/4" x 4 7/8" Working pressure by Rules 165 1/2. Manhole compensation: Size of opening in  
shell plate 20" x 16" Section of compensating ring 30" x 26" x 1" No. of rivets and diameter of rivet holes 42 of 1"  
Outer row rivet pitch at ends 7" Depth of flange if manhole flanged 3 1/4" Steam Dome: Material Iron  
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 Horizontal 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.

Survey request form

No. 2624

attached to Rpt. 43156.

FOR WILLIAM BEARDMORE & CO., LIMITED

The foregoing is a correct description,

Manufacturer.

Dates of Survey { During progress of 1923 Jul 2-24 Aug 6-28 Sep 3, 10, 19, 25, 27 Oct 1, 5 Are the approved plans of boiler and superheater forwarded herewith attached  
work in shops - - - 8, 12, 16, 19 (If not state date of approval.) to report on time 2.10.35  
while building { During erection on board vessel - - -  
Total No. of visits 15

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

This boiler has been built under Special Survey and the material tested in accordance with the rules of this Society. The material and workmanship, as far as can be seen, are sound and good.

This boiler is being shipped to Applause to be fitted on board the vessel.

This boiler has now been fitted & secured in position, examined under steam & the safety valves adjusted & found in order.

Survey Fee ... £ 13 : 6 : 0

When applied for 20/11/1923

Travelling Expenses (if any) £ : :

When received 12/12/24

Committee's Minute

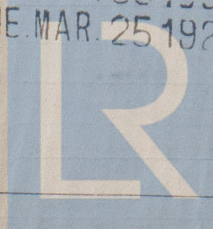
GLASGOW

20 NOV 1923

Assigned

Deferred

TUE MAR 25 1924 © 2020



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