

Rpt. 5a.

REPORT ON BOILERS.

No. 47272

905

Received at London Office

16 NOV 1927

Date of writing Report 8th Nov. 1927 When handed in at Local Office 11. 11. 1927 Port of Glasgow

No. in Reg. Book. Glasgow Date, First Survey 16. 6. 27 Last Survey 2. 11. 1927

on the TSS VYNER BROOK (Number of Visits 19) Gross 1669.76 Tons Net 712.52

Master ✓ Built at Luth By whom built Ramage & Ferguson Ltd Yard No. 264 When built 1928

Engines made at Luth By whom made Ramage & Ferguson Ltd Engine No. 264 When made 1928

Boilers made at Glasgow By whom made Jessie Barclay & Co Ltd Boiler No. RE.3 When made 1924

Nominal Horse Power 297 Owners Sarawak S.S. Co. Ltd Port belonging to Kuching

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Wm Beardmore & Co Ltd (Letter for Record S)

Total Heating Surface of Boilers 4390 sq ft Is forced draught fitted yes Coal or Oil fired ✓

No. and Description of Boilers 2. Steel return tube 2SB Working Pressure 180 lbs

Tested by hydraulic pressure to 320 lbs Date of test 2. 11. 27 No. of Certificate 14664 Can each boiler be worked separately ✓

Area of Firegrate in each Boiler 60.48 No. and Description of safety valves to each boiler ✓

Area of each set of valves per boiler per Rule Pressure to which they are adjusted as fitted 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 14'-9" Length 11'-6" Shell plates: Material S Tensile strength 28-32 tons

Thickness 1 1/32" Are the shell plates welded or flanged no Description of riveting: circ. seams end DR. overlap inter. 3/8"

long. seams 20 lbs 38.5 units in pitch Diameter of rivet holes in circ. seams 1 1/4" long. seams 1 1/4" Pitch of rivets 8 1/16"

Percentage of strength of circ. end seams plate 67.4 rivets 42.4 Percentage of strength of circ. intermediate seam plate 86.0 rivets 86.7 combined 89.2

Percentage of strength of longitudinal joint plate 86.0 rivets 86.7 combined 89.2 Working pressure of shell by Rules 183

Thickness of butt straps outer 1 1/16" inner 1 1/16" No. and Description of Furnaces in each Boiler 3 Daighlous

Material S Tensile strength 26-30 tons Smallest outside diameter 45-125"

Length of plain part top 6" bottom 6" Thickness of plates crow 9 1/16" bottom 8 1/16" Description of longitudinal joint weld

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 182

End plates in steam space: Material S Tensile strength 26-30 tons Thickness 1" Pitch of stays 14x14 1/4"

How are stays secured double nuts & washers Working pressure by Rules 225 lbs

Tube plates: Material front S back S Tensile strength 26-30 tons Thickness 1 1/16" 13 1/16"

Mean pitch of stay tubes in nests 9.425 Pitch across wide water spaces 18 1/2" Working pressure front 201 back 267

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

at centre 9 1/4 x 1 1/2" Length as per Rule 3'-0" 34 9/16" Distance apart 8 1/2" No. and pitch of stays ✓

in each 3 @ 4 1/2" Working pressure by Rules 192 Combustion chamber plates: Material S

Tensile strength 26-30 tons Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 3/8"

Pitch of stays to ditto: Sides 9 1/8 x 1 1/2" Back 8 3/4 x 8 1/2" Top 8 1/2 x 7 1/2" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 181 Front plate at bottom: Material S Tensile strength 26-30 tons

Thickness 13/16" Lower back plate: Material S Tensile strength 26-30 tons Thickness 3/8"

Pitch of stays at wide water space 18 1/2" Are stays fitted with nuts or riveted over nuts

Working Pressure 228 Main stays: Material S Tensile strength 28-32 tons

Diameter At body of stay, 2 1/2" Over threads 2 1/8" No. of threads per inch 6 Area supported by each stay 242 sq in

Working pressure by Rules 205 Screw stays: Material S Tensile strength 26-30 tons

Diameter At turned off part, 1 5/8" Over threads 1 5/8" No. of threads per inch 9 Area supported by each stay 72 sq in

Working pressure by Rules 212 Are the stays drilled at the outer ends 90. Margin stays: Diameter { At turned off part, or Over threads 1 3/4 + 1 1/8 ✓
No. of threads per inch 9 ✓ Area supported by each stay 93" Working pressure by Rules 194 ✓
Tubes: Material Low External diameter { Plain 3 1/2 ✓ Stay 3 1/2 ✓ Thickness { 9.9.4.39 ✓ 16.8.4.36 ✓ No. of threads per inch 9 ✓
Pitch of tubes 3 3/4 Working pressure by Rules 230 Manhole compensation: Size of opening in
shell plate 19 1/2 x 15 1/2 Section of compensating ring 2-11" x 2-7" ✓ No. of rivets and diameter of rivet holes 32 @ 1 3/8 ✓
Outer row rivet pitch at ends 8 5/16 ✓ Depth of flange if manhole flanged 3 1/2 ✓ 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
Number of elements Material of tubes Manufacturers of { Tubes Steel castings
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

FOR BARCLAY, CURRIE & CO., LTD.
John Alexander
ENGINE WORKS MANAGER

The foregoing is a correct description,
Manufacturer.

Dates of Survey { During progress of work in shops 1927 Jun 16-20 28 July 7-13 Aug 3-9 16-19
while building { During erection on board vessel Sep 2-13 19-27 Oct 3-10 18-25 31 Nov 2
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
Total No. of visits 19

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

These Boilers have been built under special Survey and in accordance with the Rules. The materials and workmanship are good and in completion they were tested by hydraulic pressure with satisfactory results.
The boilers are stated to have been forwarded to Leith.
These Boilers have now been securely fitted on board & found satisfactory under steam & the safety valves adjusted under steam to 180 lbs pressure.

Survey Fee ... £ 24 : 3 : -
Travelling Expenses (if any) £ ... : ... : ...
When applied for, 11. 11. 1927
When received, 21. 2. 1928

John Alexander
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 15 NOV 1927

Assigned TRANSMIT TO LONDON

TUES. 21 FEB 1928
See h/ht 7-6 x/ht
No. 17329

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Foundation