

REPORT ON BOILERS.

Received at London Office

Date of writing Report 15-10-1929 When handed in at Local Office 14-11-1929 Port of Greenock

No. in Survey held at Greenock Date, First Survey 13th December 1928. Last Survey 14th November 1929.

Reg. Book. on the S/S "Bibury" (Number of Visits /) Gross 4615.56. Tons Net 2898.13.

Master Built at Greenock By whom built Messrs Duncan's Yard No. 393 When built 1929
Engines made at Greenock By whom made Rankine & Blackmore & Co Ltd Engine No. 434 When made 1929
Boilers made at ditto By whom made ditto Boiler No. 434 When made 1929
Nominal Horse Power 489 Owners Alexandre Siffert & Co Port belonging to London.

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel James Dunlop & Co Ltd (Letter for Record S)

Total Heating Surface of Boilers 6060 sq ft Is forced draught fitted yes Coal or Oil fired coal

No. and Description of Boilers Two single ended Working Pressure 200 lbs

Tested by hydraulic pressure to 350 lbs Date of test 29-8-29 No. of Certificate 1887 Can each boiler be worked separately yes

Area of Firegrate in each Boiler 55 sq ft No. and Description of safety valves to each boiler one double lockburn's Improved High Lift

Area of each set of valves per boiler per Rule 8.82 sq ft as fitted 11.88 sq ft Pressure to which they are adjusted 205 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 10 1/2" Is oil fuel carried in the double bottom under boilers no

Smallest distance between shell of boiler and tank top plating 24" Is the bottom of the boiler insulated yes

Largest internal dia. of boilers 15'-10 9/16" Length 11'-6" Shell plates: Material S Tensile strength 28-32 TNS

Thickness 1 7/16" Are the shell plates welded or flanged no Description of riveting: circ. seams end Double inter. 4.308"

long. seams J.D.B.S. Diameter of rivet holes in circ. seams 1 1/2" Pitch of rivets 10.25" long. seams 1 1/2"

Percentage of strength of circ. end seams plate 65.2 rivets 46.8 Percentage of strength of circ. intermediate seam plate rivets

Percentage of strength of longitudinal joint plate 85.3 rivets 92.4 combined 89.15 Working pressure of shell by Rules 201 lbs

Thickness of butt straps outer 1 3/32" inner 1 1/32" No. and Description of Furnaces in each Boiler Three Deighton Type 3 Cf.

Material S Tensile strength 26-30 TNS Smallest outside diameter 3'-8 1/4"

Length of plain part top bottom Thickness of plates crown 5/8" bottom 5/8" Description of longitudinal joint weld

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 206 lbs

End plates in steam space: Material S Tensile strength 26-30 TNS Thickness 1 3/8" Pitch of stays 1'-11" x 1'-6 7/8"

How are stays secured nuts inside & outside Working pressure by Rules 200.5 lbs

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

Mean pitch of stay tubes in nests 9 1/16" Pitch across wide water spaces 13 1/2" x 9 3/4" Working pressure front 206 lbs back 203.5 lbs

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

at centre 10 1/4" x 1 1/2" Length as per Rule 2'-10 15/32" Distance apart 9 1/4" No. and pitch of stays

in each 3 @ 8 7/8" Working pressure by Rules 229 lbs Combustion chamber plates: Material S

Tensile strength 26-30 TNS Thickness: Sides 1 11/16" Back 23/32" Top 1 11/16" Bottom 1 13/16"

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

Working pressure by Rules 201 lbs Front plate at bottom: Material S Tensile strength 26-30 TNS

Thickness 1" Lower back plate: Material S Tensile strength 26-30 TNS Thickness 31/32"

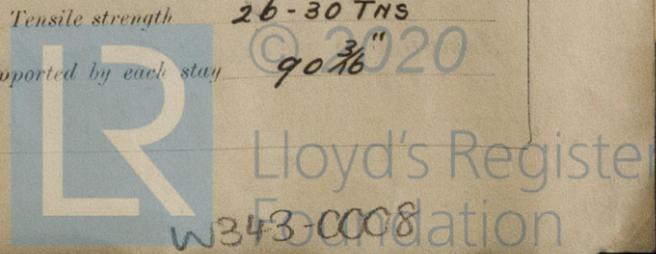
Pitch of stays at wide water space 13 1/4" x 9 1/4" Are stays fitted with nuts or riveted over nuts

Working Pressure 206 lbs Main stays: Material S Tensile strength 28-32 TNS

Diameter At body of stay, or Over threads 3 3/8" No. of threads per inch 6 Area supported by each stay 434 8/16"

Working pressure by Rules 201.5 lbs Screw stays: Material S Tensile strength 26-30 TNS

Diameter At turned off part, or Over threads 1 3/4" No. of threads per inch 9 Area supported by each stay 90 3/16"



Working pressure by Rules 201 lbs. Are the stays drilled at the outer ends *no* Margin stays: Diameter ^{At turned off part.} _{or} Over threads 2"

No. of threads per inch 9. Area supported by each stay 122 7/16 sq"

Tubes: Material *Iron* External diameter ^{Plain} 2 3/4" ^{Stay} 2 3/4" Thickness ^{9 WG} 3/8" ^{below threads} 1/4" No. of threads per inch 9

Pitch of tubes 3 7/8" Working pressure by Rules 208 lbs Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 3' 9 1/8" x 2' 5 1/2" x 17/16" No. of rivets and diameter of rivet holes 28 @ 1 1/2"

Outer row rivet pitch at ends 10 5/8" Depth of flange if manhole flanged ✓ 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

How connected to shell Inner radius of crown Working pressure by Rules

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 22 inclusive for boilers been complied with

The foregoing is a correct description,
 RANKIN & BLACKMORE LTD. Manufacturer.
[Signature] Director.

Dates of Survey ^{During progress of work in shops - -} _{while building} ^{During erection on board vessel - - -}

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) *Yes*

Total No. of visits

SEE MACHINERY REPORT.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *These Boilers have been built under special Survey in accordance with the approved plans & the workmanship and material are of good quality. They are now securely fitted on board. This Report accompanies trial of the Machinery.*

Survey Fee *charged on* : When applied for. 192
 Travelling Expenses (if any) *Machinery kept* : When received. 192

W. Gordon-Mitchell
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 19 NOV 1929

Assigned *See accompanying machinery report.*

