

REPORT ON BOILERS.

No. 77784

Received at London Office

THU. APR. 17 1924

Date of writing Report

102

When handed in at Local Office

10/4/1924

Port of

NEWCASTLE-ON-TYNE.

No. in Survey held at
Reg. Book.

Newcastle

Date, First Survey

21. Dec 1923

Last Survey

10 April 1924

40970 on the

Steel

"SALMO"

(Number of Visits)

Gross

Tons

Net

Master

Built at Newcastle

By whom built

Swan Hunter & Wigham
Richardson & Co.

Yard No. 1235

When built 1924

Engines made at

Newcastle

By whom made

Walkend Slipway & Eng. Co. Ltd.

Engine No. 854 When made 1924

Boilers made at

Newcastle

By whom made

Walkend Slipway & Eng. Co. Ltd.

Boiler No. 854 When made 1924

Nominal Horse Power

214

Owners

Ellerman's Wilson Line Ltd.

Port belonging to

Hull.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel D. Colville & Co. Spence & Horn Ltd. (Letter for Record 3)

Total Heating Surface of Boilers 3328 sq ft Is forced draught fitted Yes Coal or Oil fired Coal

No. and Description of Boilers Two Single-ended 2.5B Cylindrical Working Pressure 225 lbs

Tested by hydraulic pressure to 388 lbs Date of test 20. 2. 24 No. of Certificate 9809 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 41.3 sq ft No. and Description of safety valves to each boiler Two Spring-loaded

Area of each set of valves per boiler per Rule 6.28 sq ft 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 on uptakes and bunkers on woodwork 53" Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 25 1/2" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 12' 1 1/16" Length 12' 0" Shell plates: Material Steel Tensile strength 30-34 tons

Thickness 1 3/16" Are the shell plates welded or flanged No Description of riveting: circ. seams end Double inter.

long. seams Double Ra. D.B.S. Diameter of rivet holes in circ. seams 1 1/4" Pitch of rivets 3.724" 8 3/8"

Percentage of strength of circ. end seams plate 66.4 rivets 43.3 Percentage of strength of circ. intermediate seam plate rivets

Percentage of strength of longitudinal joint plate 85 rivets 88.2 combined 110 Working pressure of shell by Rules 227 lbs

Thickness of butt straps outer 1 3/16" inner 1 3/16" No. and Description of Furnaces in each Boiler 2 Cf. Two Reighton

Material Steel Tensile strength 26/30 tons Smallest outside diameter 44 1/8"

Length of plain part top bottom Thickness of plates crown 3/4" bottom 1/4" Description of longitudinal joint Weld

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 247 lbs

End plates in steam space: Material Steel Tensile strength 26/30 tons Thickness 1 1/4" Pitch of stays 17 1/2" x 16"

How are stays secured Double nuts Working pressure by Rules 236 lbs

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

Mean pitch of stay tubes in nests 7 1/2" Pitch across wide water spaces 13' x 7 1/2" Working pressure front 245 lbs back 585 lbs

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

at centre 9 7/8" x 1 1/2" Length as per Rule 34 1/4" Distance apart 8 1/4" No. and pitch of stays

in each Three 8 1/16" Working pressure by Rules 234 lbs Combustion chamber plates: Material Steel

Tensile strength 26/30 tons Thickness: Sides 3/32" Back 1/16" Top 3/32" Bottom 1"

Pitch of stays to ditto: Sides 8 1/4" x 8 1/16" Back 8 5/8" x 8 3/8" Top 8 1/4" x 8 1/16" Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules 227 lbs Front plate at bottom: Material Steel Tensile strength 26/30 tons Thickness 7/8"

Thickness 1" Lower back plate: Material Steel Tensile strength 26/30 tons Thickness 7/8"

Pitch of stays at wide water space 13 7/8" x 8 3/8" Are stays fitted with nuts or riveted over Nuts

Working Pressure 238 lbs Main stays: Material Steel Tensile strength 28/32 tons

Diameter At body of stay, or Over threads 3" No. of threads per inch Six Area supported by each stay 280 sq in

Working pressure by Rules 240 lbs Screw stays: Material Steel Tensile strength 26/30 tons

Diameter At turned off part, or Over threads 1 3/4" + 1 7/8" No. of threads per inch Nine Area supported by each stay 72.29" 66.90"

Working pressure by Rules 225 1/2 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, or Over threads 1 7/8"
No. of threads per inch nine Area supported by each stay 9440" Working pressure by Rules 226 1/2
Tubes: Material Steel External diameter { Plain 2 1/2" Stay 3/8" Thickness 1/16" No. of threads per inch nine
Pitch of tubes 3 3/4" Working pressure by Rules plain 300 lbs stay Manhole compensation: Size of opening in
shell plate 16" x 12" Section of compensating ring 40" x 30" x 1 3/16" No. of rivets and diameter of rivet holes 40 - 1 1/4"
Outer row rivet pitch at ends 8 3/8" Depth of flange if manhole flanged not flanged 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 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

The foregoing is a correct description

Manufacturer.

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

See Machinery Report.

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

Total No. of visits

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

These Boilers were constructed under Special Survey. The materials and workmanship are sound and good. They were tested by hydraulic pressure with satisfactory results, were efficiently installed on board the Steamer "Salmo" and the safety valves were adjusted under steam. The vessel is eligible, in my opinion, for notation -1-L.M.C. 4. 24 ✓

Survey Fee £

Travelling Expenses (if any) £

When applied for, 192

When received, 192

R. Lee Amess
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

WFO. 23 APR. 1924

Assigned

See other Rpt
Nwc 77784



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Foundation