

# REPORT ON BOILERS.

No. 77162.

WFD. 24 OCT. 1923

Received at London Office

NEWCASTLE-ON-TYNE

Date of writing Report 22<sup>nd</sup> Oct 1923. When handed in at Local Office 22<sup>nd</sup> Oct 1923. Port of \_\_\_\_\_

No. in Survey held at South Shields. Date, First Survey \_\_\_\_\_ Last Survey \_\_\_\_\_ 192

Reg. Book. 40874 on the SS. "SARNIA" (Number of Visits ) Gross 710. Tons Net 320.

Master \_\_\_\_\_ Built at So. Shields. By whom built C. Remondson Hold. Yard No. 198 When built 1923.

Engines made at Dundee. By whom made Baggesen & Co. Engine No. 118 When made 1923.

Boilers made at Stockton-on-Tees. By whom made Riley Bros. Co. Boiler No. 5473 When made 1923.

Nominal Horse Power \_\_\_\_\_ Owners B. Dony & Sons. Port belonging to Guernsey.

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

Manufacturers of Steel \_\_\_\_\_ (Letter for Record \_\_\_\_\_)

Total Heating Surface of Boilers 1958 sq. ft. Is forced draught fitted No. Coal or Oil fired Coal.

No. and Description of Boilers Two. Single Ended Multitubular Working Pressure 180 lbs.

Tested by hydraulic pressure to \_\_\_\_\_ Date of test \_\_\_\_\_ No. of Certificate 6329. Can each boiler be worked separately Yes!

Area of Firegrate in each Boiler 34.4 sq. ft. No. and Description of safety valves to each boiler 2. Spring Loaded.

Area of each set of valves per boiler {per Rule 623. as fitted 3970" Pressure to which they are adjusted 185 lb/sq. 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 3'-6" 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 \_\_\_\_\_ Length \_\_\_\_\_ Shell plates: Material \_\_\_\_\_ Tensile strength \_\_\_\_\_

Thickness \_\_\_\_\_ Are the shell plates welded or flanged \_\_\_\_\_ Description of riveting: circ. seams {end \_\_\_\_\_ inter. \_\_\_\_\_

long. seams \_\_\_\_\_ Diameter of rivet holes in {circ. seams \_\_\_\_\_ long. seams \_\_\_\_\_ Pitch of rivets { \_\_\_\_\_

Percentage of strength of circ. end seams {plate \_\_\_\_\_ rivets \_\_\_\_\_ Percentage of strength of circ. intermediate seam {plate \_\_\_\_\_ rivets \_\_\_\_\_

Percentage of strength of longitudinal joint {plate \_\_\_\_\_ rivets \_\_\_\_\_ combined \_\_\_\_\_ Working pressure of shell by Rules \_\_\_\_\_

Thickness of butt straps {outer \_\_\_\_\_ inner \_\_\_\_\_ No. and Description of Furnaces in each Boiler \_\_\_\_\_

Material \_\_\_\_\_ Tensile strength \_\_\_\_\_ Smallest outside diameter \_\_\_\_\_

Length of plain part {top \_\_\_\_\_ bottom \_\_\_\_\_ Thickness of plates {crown \_\_\_\_\_ bottom \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_

Dimensions of stiffening rings on furnace or c.c. bottom \_\_\_\_\_ Working pressure of furnace by Rules \_\_\_\_\_

End plates in steam space: Material \_\_\_\_\_ Tensile strength \_\_\_\_\_ Thickness \_\_\_\_\_ Pitch of stays \_\_\_\_\_

How are stays secured \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_

Tube plates: Material {front \_\_\_\_\_ back \_\_\_\_\_ Tensile strength { \_\_\_\_\_ Thickness { \_\_\_\_\_

Mean pitch of stay tubes in nests \_\_\_\_\_ Pitch across wide water spaces \_\_\_\_\_ Working pressure {front \_\_\_\_\_ back \_\_\_\_\_

Girders to combustion chamber tops: Material \_\_\_\_\_ Tensile strength \_\_\_\_\_ Depth and thickness of girder \_\_\_\_\_

at centre \_\_\_\_\_ Length as per Rule \_\_\_\_\_ Distance apart \_\_\_\_\_ No. and pitch of stays \_\_\_\_\_

in each \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_ Combustion chamber plates: Material \_\_\_\_\_

Tensile strength \_\_\_\_\_ Thickness: Sides \_\_\_\_\_ Back \_\_\_\_\_ Top \_\_\_\_\_ Bottom \_\_\_\_\_

Pitch of stays to ditto: Sides \_\_\_\_\_ Back \_\_\_\_\_ Top \_\_\_\_\_ Are stays fitted with nuts or riveted over \_\_\_\_\_

Working pressure by Rules \_\_\_\_\_ Front plate at bottom: Material \_\_\_\_\_ Tensile strength \_\_\_\_\_

Thickness \_\_\_\_\_ Lower back plate: Material \_\_\_\_\_ Tensile strength \_\_\_\_\_ Thickness \_\_\_\_\_

Pitch of stays at wide water space \_\_\_\_\_ Are stays fitted with nuts or riveted over \_\_\_\_\_

Working Pressure \_\_\_\_\_ Main stays: Material \_\_\_\_\_ Tensile strength \_\_\_\_\_

Diameter {At body of stay, \_\_\_\_\_ or \_\_\_\_\_ Over threads \_\_\_\_\_ No. of threads per inch \_\_\_\_\_ Area supported by each stay \_\_\_\_\_

Working pressure by Rules \_\_\_\_\_ Screw stays: Material \_\_\_\_\_ Tensile strength \_\_\_\_\_

Diameter {At turned off part, \_\_\_\_\_ or \_\_\_\_\_ Over threads \_\_\_\_\_ No. of threads per inch \_\_\_\_\_ Area supported by each stay \_\_\_\_\_

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Working pressure by Rules \_\_\_\_\_ Are the stays drilled at the outer ends \_\_\_\_\_ Margin stays: Diameter { At turned off part, \_\_\_\_\_ or \_\_\_\_\_ Over threads \_\_\_\_\_

No. of threads per inch \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_

Tubes: Material \_\_\_\_\_ External diameter { Plain \_\_\_\_\_ Stay \_\_\_\_\_ Thickness { \_\_\_\_\_ No. of threads per inch \_\_\_\_\_

Pitch of tubes \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_ Manhole compensation: Size of opening in \_\_\_\_\_

shell plate \_\_\_\_\_ Section of compensating ring \_\_\_\_\_ No. of rivets and diameter of rivet holes \_\_\_\_\_

Outer row rivet pitch at ends \_\_\_\_\_ Depth of flange if manhole 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 \_\_\_\_\_

The foregoing is a correct description, \_\_\_\_\_  
Manufacturer \_\_\_\_\_

Dates of Survey { During progress of work in shops - - } \_\_\_\_\_ Are the approved plans of boiler and superheater forwarded herewith \_\_\_\_\_ (If not state date of approval.) \_\_\_\_\_

while building { During erection on board vessel - - } \_\_\_\_\_ Total No. of visits \_\_\_\_\_

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *These boilers have now been efficiently installed and fastened on the SS. "Sarmia". The safety valves have been adjusted under steam to the approved working pressure.*

*For missing particulars see Middleborough Rpt Nos 11670 & 11671.*

Survey Fee ... .. £ : : _____	When applied for, _____ 192
Travelling Expenses (if any) £ ✓ : : _____	When received, _____ 192

*L. Pickett.*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute \_\_\_\_\_ FRI. 26 OCT. 1923

Assigned \_\_\_\_\_

