

REPORT ON BOILERS.

No. 11978

Received at London Office

SAT. JUN. 27 1924

Date of writing Report 19.6.24 When handed in at Local Office 19.6.24 Port of Middlesbrough

No. in Reg. Book. 102 Survey held at Stockton-on-Tees Date, First Survey 26th May Last Survey 14th June 1924

on the Steamer WYRESDALE (Number of Visits 4) Tons { Gross 53.72 Net 25.3

Master _____ Built at Fleetwood By whom built James Robertson & Sons Yard No. 6 When built 1924

Engines made at Fleetwood By whom made James Robertson & Sons Engine No. 6 When made 1924

Boilers made at Stockton By whom made Messrs Riley Bros Ltd Boiler No. 5530 When made 1924

Nominal Horse Power 18 Owners Fleetwood Urban District Council Port belonging to Fleetwood

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Thorn South Durham, S. & Co (Waltham) & Steel Co of Scotland (Letter for Record (5))

Total Heating Surface of Boilers 365 Is forced draught fitted _____ Coal or Oil fired _____

No. and Description of Boilers One Single ended Working Pressure 170

Tested by hydraulic pressure to 305 Date of test 14.6.24 No. of Certificate 6368 Can each boiler be worked separately _____

Area of Firegrate in each Boiler 14.8 No. and Description of safety valves to each boiler Two Spring Loaded

Area of each set of valves per boiler { per Rule 2.46 sq. ins. as fitted 4.9 sq. ins. Pressure to which they are adjusted 160 lbs. (all required) 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 15" 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 7'-6" Length 8'-0" Shell plates: Material steel Tensile strength 28-32

Thickness 5/8 Are the shell plates welded or flanged _____ Description of riveting: circ. seams { end D.R. left inter. _____

long. seams 2 B-3 Riv 4 Rivets Diameter of rivet holes in { circ. seams 15/16 long. seams 13/16 Pitch of rivets { 3" 5 1/16

Percentage of strength of circ. end seams { plate 68.66 rivets 60.4 Percentage of strength of circ. intermediate seam { plate _____ rivets _____

Percentage of strength of longitudinal joint { plate 83.99 rivets 101.5 combined 93.35 Working pressure of shell by Rules 171

Thickness of butt straps { outer 1/2" inner 5/8" No. and Description of Furnaces in each Boiler one plain

Material steel Tensile strength 26-30 Smallest outside diameter 41"

Length of plain part { top 65 3/8 bottom 69 Thickness of plates { crown 23/32 bottom 32 Description of longitudinal joint Weld

Dimensions of stiffening rings on furnace or c.c. bottom _____ Working pressure of furnace by Rules 184

End plates in steam space: Material steel Tensile strength 26-30 Thickness 13/16 Pitch of stays 13 x 12 1/2 to tubes 10 1/2

How are stays secured nuts (8 x 9/16) Working pressure by Rules 192

Tube plates: Material { front steel back steel Tensile strength { 26-30 26-30 Thickness { 13/16 13/16

Mean pitch of stay tubes in nests 8.69 Pitch across wide water spaces 12 x 3 3/4 Working pressure { front 285 back 193

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

at centre 4 1/2 x 2 Length as per Rule 24 Distance apart 7 No. and pitch of stays _____

in each 2 @ 8 Working pressure by Rules 178 Combustion chamber plates: Material steel

Tensile strength 26-30 Thickness: Sides 5/8 Back 5/8 Top 5/8 Bottom 35/32

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

Working pressure by Rules 171 Front plate at bottom: Material steel Tensile strength 26-30

Thickness 13/16 Lower back plate: Material steel Tensile strength 26-30 Thickness 13/16

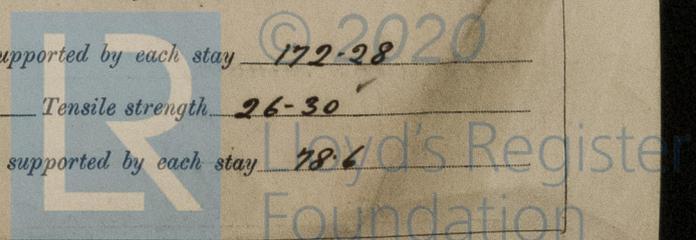
Pitch of stays at wide water space 9 1/4 x 8 1/2 Are stays fitted with nuts or riveted over nuts

Working Pressure 341 Main stays: Material steel Tensile strength 28-32

Diameter { At body of stay 2 1/4 Over threads 2 1/4 No. of threads per inch 6 Area supported by each stay 172-28

Working pressure by Rules 200 Screw stays: Material steel Tensile strength 26-30

Diameter { At turned off part. 1 5/8 Over threads 1 5/8 No. of threads per inch 9 Area supported by each stay 78.6



Working pressure by Rules 194 Are the stays drilled at the outer ends yes Margin stays: Diameter { At turned off part, 1 3/4 or Over threads 1 3/4 ✓
 No. of threads per inch 9 Area supported by each stay 88 Working pressure by Rules 210
 Tubes; Material iron External diameter { Plain 2 3/4 ✓ Stay 2 3/4 ✓ Thickness { 9/16 ✓ No. of threads per inch 9 ✓
 Pitch of tubes 3 3/4 x 3 3/4 Working pressure by Rules 215 Manhole compensation: Size of opening in shell plate 20 x 16 Section of compensating ring 7 x 3/4 No. of rivets and diameter of rivet holes 40 @ 1 5/16 ✓
 Outer row rivet pitch at ends 6 ✓ Depth of flange if manhole flanged ✓ Steam Dome: Material steel ✓
 Tensile strength 26-30 ✓ Thickness of shell 1/2 ✓ Description of longitudinal joint single riv lap ✓
 Diameter of rivet holes 1 3/16 ✓ Pitch of rivets 2 ✓ Percentage of strength of joint { Plate 59.5 Rivets 42.7
 Internal diameter 24 ✓ Working pressure by Rules 196 Thickness of crown 1/2 ✓ No. and diameter of stays none ✓ Inner radius of crown 2'-0" ✓ Working pressure by Rules 244
 How connected to shell 2 R. Kg. ✓ Size of doubling plate under dome 3'-6" x 5' ✓ Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 3/16 @ 5/8 ✓

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 OR

RILEY BROS. (BOILERMAKERS) LIMITED.
 The foregoing is a correct description,
 J. S. Shields, SECRETARY, Manufacturer.

Dates of Survey { During progress of work in shops - - } 1924 May 26 June 5 12 14 Are the approved plans of boiler and superheater forwarded herewith yes ✓
 while building { During erection on board vessel - - - } 2nd & 10th July 1924 Total No. of visits 6

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under Special Survey: is of good material and workmanship and on completion was tested by hydraulic pressure with satisfactory results.
It is stated that the boiler will be fitted on board at Fleetwood

Survey Fee £ 4-4-0 } When applied for, MONTHLY A/c 192
 Travelling Expenses (if any) £ : : } When received, _____ 192

Wm Morrison
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute _____

Assigned See Machinery report.



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