

REPORT ON BOILERS.

24 JUN 1925

Sld. No. 29090
Mals No. 12273

Received at London Office

5 MAR 1925

Date of writing Report 1925 When handed in at Local Office 4/3/1925 Port of Middlesbrough
 No. in Survey held at Stockton-on-Tees Date, First Survey 21st November Last Survey 2/8/1925
 on the new steel S.S. SANDSEND (Number of Visits 12) Tons {Gross 3612
 Net 2146
 Built at Sunderland By whom built W. Pickering & Sons Yard No. 214 When built 1925
 Engines made at Sunderland By whom made G. Clarks. Ltd Engine No. 1141 When made 1925
 Boilers made at Stockton By whom made Riley Bros Ltd Boiler No. 5555 When made 1925
 Owners Roxland & Marwood's S.S. Co Ltd Port belonging to Whitty
(Headlam & Roxland mgs)

MULTITUBULAR BOILERS ~~MAIN, AUXILIARY~~, OR DONKEY.

Manufacturers of Steel David Colville & Sons. Ltd. (Letter for Record (S))
 Total Heating Surface of Boilers 1010 sq ft Is forced draught fitted No Coal or Oil fired Coal
 No. and Description of Boilers One Single Ended Working Pressure 180 lbs
 Tested by hydraulic pressure to 320 lbs Date of test 2-8-25 No. of Certificate 6439 Can each boiler be worked separately Yes
 Area of Firegrate in each Boiler 34'4" No. and Description of safety valves to each boiler Two - Quiet spring loaded
 Area of each set of valves per boiler {per Rule 6.44 sq ft Pressure to which they are adjusted 183 lbs Are they fitted with easing gear Yes
 {as fitted 4.96 sq ft No.
 In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No.
 Smallest distance between uptakes and bunkers 4'-0" Is oil fuel carried in the double bottom under boilers Yes
 Smallest distance between shell of boiler and tank top plating Boiler on upper deck Is the bottom of the boiler insulated No
 Largest internal dia. of boilers 10'-6" Length 10'-6" Shell plates: Material Steel Tensile strength 28-32 tons
 Thickness 7/8" Are the shell plates welded or flanged Yes Description of riveting: circ. seams {end 2 rows. 2 rivets
 {inter. 3/4"
 {circ. seams 1 1/16" Pitch of rivets {long. seams 15/16" 6 7/8"
 {plate 67.3 Percentage of strength of circ. intermediate seam {rivets 51.2
 {rivets 86.37 Working pressure of shell by Rules 181 lbs
 {combined 88.3
 {combined 90.38
 Thickness of butt straps {outer 2 1/32" No. and Description of Furnaces in each Boiler 2 plain
 {inner 25/32" Material Steel Tensile strength 26-30 tons Smallest outside diameter 39"
 Length of plain part {top 78 3/4" Thickness of plates {crown 3/4" Description of longitudinal joint weld.
 {bottom 108" Working pressure of furnace by Rules 180 lbs
 Dimensions of stiffening rings on furnace or c.c. bottom Yes Working pressure of furnace by Rules 180 lbs
 End plates in steam space: Material Steel Tensile strength 26-30 tons Thickness 27/32" Pitch of stays 15 x 13 1/4"
 How are stays secured DN & 8 1/2" x 9/16" loose washers Working pressure by Rules 179 lbs
 Tube plates: Material {front Steel Tensile strength 26-30 tons Thickness {back 3/4"
 {back Steel Working pressure {front 181 lbs
 {back 196 lbs
 Mean pitch of stay tubes in nests 10'8" Pitch across wide water spaces 14 x 8 1/2" Working pressure {front 181 lbs
 {back 196 lbs
 Orders to combustion chamber tops: Material Steel Tensile strength 28-32 tons Depth and thickness of girder
 centre 7' x 1 1/2" Length as per Rule 30' Distance apart 7 1/2' No. and pitch of stays
 each 2 at 9 1/2" Working pressure by Rules 190 lbs Combustion chamber plates: Material Steel
 Tensile strength 26-30 tons Thickness: Sides 2 1/32" Back 9/8" Top 2 1/32" Bottom 1 1/32"
 Pitch of stays to ditto: Sides 8 1/2" x 9 1/2" Back 9 x 8 1/4" Top 7 1/2" x 9 1/2" Are stays fitted with nuts or riveted over nuts
 Working pressure by Rules 181 lbs Front plate at bottom: Material Steel Tensile strength 26-30 tons Thickness 27/32"
 Thickness 27/32" Lower back plate: Material Steel Tensile strength 26-30 tons Thickness 27/32"
 Pitch of stays at wide water space 14 x 8 1/4" Are stays fitted with nuts or riveted over nuts
 Working Pressure 220 lbs Main stays: Material Steel Tensile strength 28-32 tons
 Diameter {At body of stay, 2 3/8" No. of threads per inch 6 Area supported by each stay 199 sq in
 {Over threads, 2 3/8" Screw stays: Material Steel Tensile strength 26-30 tons
 Working pressure by Rules 197 lbs No. of threads per inch 9 Area supported by each stay 7425 sq in
 Diameter {At turned off part, 1 5/8"

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Working pressure by Rules 203 lbs Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part. 1 3/4"
 No. of threads per inch 9 Area supported by each stay 91 sq Working pressure by Rules 200 lbs
 Tubes: Material Iron External diameter { Plain 3 1/4" Thickness 8 wg No. of threads per inch 9
 Pitch of tubes 4 1/4" x 4 1/2" Working pressure by Rules 230 & 202 lbs Manhole compensation: Size of opening in
 shell plate 16" x 20" Section of compensating ring 8" x 1" MS NEIL No. of rivets and diameter of rivet holes 40 - 1 1/16"
 Outer row rivet pitch at ends 8" Depth of flange if manhole flanged ✓ Steam Dome: Material none
 Tensile strength _____ Thickness of shell _____ Description of longitudinal joint _____
 Diameter of rivet holes _____ Pitch of rivets _____ Percentage of strength of joint { Plate _____
 Internal diameter _____ Working pressure by Rules _____ Thickness of crown _____ Rivets _____
 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 _____
 Number of elements _____ Material 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 Yes

RILEY BROS. (BOILERMAKERS) LIMITED.
 The foregoing is a correct description,

J. H. Shields **SECRETARY**, Manufacturer.

Dates of Survey { During progress of work in shops - 1924. Dec 21. 22. 23. 1925. Jan 9. 15. 20. 26. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
 { During erection on board vessel - Feb. 13. 19. 27. Mar 2
 Total No. of visits 12

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler is a duplicate of Builders No 5558. Our Report No. 12249.

This boiler has been constructed under special survey, is of good material and workmanship and on completion was tested by hydraulic pressure with satisfactory results.

This boiler has now been fitted and satisfactorily fixed in the vessel

L. Anderson

Survey Fee ... £ 6 : 14 : - When applied for, MONTHLY A/c. 192
 Travelling Expenses (if any) £ : : When received, 192

W. H. Roberts & L. Anderson
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 30 JUN 1925

Assigned _____



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 Foundation