

REPORT ON BOILERS.

No. 76776

Date of writing Report 1923 When handed in at Local Office 30/5/1923 Port of NEWCASTLE
 No. in Reg. Book. 102 Survey held at South Shields Date, First Survey 11 October/23 Last Survey 16 May 1925
 on the S.S. Steelville (Number of Visits 2) Gross Tons 3724.39 Net Tons 2299.83
 Master John Readhead & Sons Ltd Built at South Shields By whom built John Readhead & Sons Ltd Yard No. 472 When built 1923
 Engines made at South Shields By whom made John Readhead & Sons Ltd Engine No. 472 When made 1923
 Boilers made at South Shields By whom made John Readhead & Sons Ltd Boiler No. 472 When made 1923
 Nominal Horse Power 328 Owners George Henry Stansfield Port belonging to Newcastle on Tyne

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel J. Spence & Sons, Ltd. (Letter for Record ✓)
 Total Heating Surface of Boilers 899.5 sq ft Is forced draught fitted No. Coal or Oil fired Coal.
 No. and Description of Boilers one cylr. multi. single ended. Working Pressure 90 lb/sq in.
 Tested by hydraulic pressure to 180 lb/sq in. Date of test 29.3.23. No. of Certificate 9749. Can each boiler be worked separately ✓
 Area of Firegrate in each Boiler 29.2 sq ft No. and Description of safety valves to each boiler 2 spring loaded.
 Area of each set of valves per boiler {per Rule 11.54 as fitted 11.86 Pressure to which they are adjusted 90 lb/sq in. Are they fitted with easing gear yes.
 In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No.
 Smallest distance between boilers or uptakes and bunkers or woodwork 18" Is oil fuel carried in the double bottom under boilers No.
 Smallest distance between shell of boiler and tank top plating 18" Is the bottom of the boiler insulated yes.
 Largest internal dia. of boilers 10' 0" Length 10' 0" Shell plates: Material Steel Tensile strength 28-32 tons/sq in.
 Thickness 3/16" Are the shell plates welded or flanged No. Description of riveting: circ. seams {end LAP. D.R. inter. ✓
 long. seams D.O.S. / D.R. Diameter of rivet holes in {circ. seams 13/16" long. seams 13/16" Pitch of rivets {3" 4 1/4"
 Percentage of strength of circ. end seams {plate 68.7 rivets 63.6 Percentage of strength of circ. intermediate seam {plate ✓ rivets ✓
 Percentage of strength of longitudinal joint {plate 80.8 rivets 100.2 combined 95.16 Working pressure of shell by Rules 109 lb/sq in.
 Thickness of butt straps {outer 1/2" inner 5/8" No. and Description of Furnaces in each Boiler 2 plain.
 Material Steel Tensile strength 26-30 tons/sq in. Smallest outside diameter 3' 0"
 Length of plain part {top 6' 2" bottom 8' 9" Thickness of plates {crown 9/16" bottom 9/16" Description of longitudinal joint weld.
 Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 91 lb/sq in.
 End plates in steam space: Material Steel Tensile strength 26-30 tons/sq in. Thickness 3/4" Pitch of stays 18" x 18"
 How are stays secured D.N. + W. Working pressure by Rules 110 lb/sq in.
 Tube plates: Material {front Steel back Steel Tensile strength {26-30 tons/sq in. Thickness {3/4" 3/8"
 Mean pitch of stay tubes in nests 9" x 9" Pitch across wide water spaces 13 1/2" x 9" Working pressure {front 104 lb/sq in. back ✓
 Girders to combustion chamber tops: Material Steel Tensile strength 28-32 tons/sq in. Depth and thickness of girder
 at centre 6" x 1 1/4" Length as per Rule 26" Distance apart 10" No. and pitch of stays
 in each 2 at 8" Working pressure by Rules 114 lb/sq in. Combustion chamber plates: Material Steel
 Tensile strength 26-30 tons/sq in. Thickness: Sides 1/2" Back 1/2" Top 1/2" Bottom 1/16"
 Pitch of stays to ditto: Sides 10" x 9" Back 10" x 9" Top 10" x 8" Are stays fitted with nuts or riveted over Nuts
 Working pressure by Rules 93 lb/sq in. Front plate at bottom: Material Steel Tensile strength 26-30 tons/sq in.
 Thickness 3/4" Lower back plate: Material Steel Tensile strength 26-30 tons/sq in. Thickness 3/4"
 Pitch of stays at wide water space 13 1/2" x 9" Are stays fitted with nuts or riveted over Nuts
 Working Pressure 110 lb/sq in. Main stays: Material Steel Tensile strength 28-32 tons/sq in.
 Diameter {At body of stay, 2 1/2" or Over threads No. of threads per inch 6 Area supported by each stay 324 sq in.
 Working pressure by Rules 136 lb/sq in. Screw stays: Material Iron Tensile strength ✓
 Diameter {At turned off part, 1 1/2" or Over threads No. of threads per inch 9 Area supported by each stay 900 sq in.

REPORT ON BOILERS

Working pressure by Rules 139/60" Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, or Over threads 1 1/2"

No. of threads per inch 9 Area supported by each stay 121.60" Working pressure by Rules 104/16, 15"

Tubes: Material Iron External diameter { Plain 3 1/2" Stay 3 1/2" Thickness { Nº 10 W.G. 5/16" No. of threads per inch 9

Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 104/16, 15" Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 14" x 9 1/2" No. of rivets and diameter of rivet holes 38 x 1 3/16"

Outer row rivet pitch at ends 5" Depth of flange if manhole flanged 3" (Bottom hole) Steam Dome: Material ✓ None

Tensile strength 554 Thickness of shell 5/16" Description of longitudinal joint None

Diameter of rivet holes 1 1/16" Pitch of rivets 4" Percentage of strength of joint { Plate 100% Rivets 100%

Internal diameter 24" Working pressure by Rules 104/16, 15" Thickness of crown 5/16" No. and diameter of stays 12 x 1 1/2"

How connected to shell None Inner radius of crown None Working pressure by Rules 104/16, 15"

Size of doubling plate under dome None Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell None

Type of Superheater None Manufacturers of { Tubes None Steel castings None

Number of elements None Material of tubes None Internal diameter and thickness of tubes None

Material of headers None Tensile strength None Thickness None Can the superheater be shut off and the boiler be worked separately None

Is a safety valve fitted to every part of the superheater which can be shut off from the boiler None

Area of each safety valve None Are the safety valves fitted with easing gear None Working pressure as per Rules None

Pressure to which the safety valves are adjusted None Hydraulic test pressure: tubes None castings None and after assembly in place None Are drain cocks or valves fitted to free the superheater from water where necessary None

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with Yes.

FOR JOHN READHEAD & SONS LTD.

The foregoing is a correct description,

W. P. Dewar, Esq. Manager. Manufacturer.

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

while building { During erection on board vessel - - } See machinery Report Total No. of visits 1

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

This donkey boiler was built under special survey, and the materials and workmanship are good. After putting on board in place, the boiler was steamed and the safety valves adjusted.

Survey Fee ... £ 102 : When applied for, 102

Travelling Expenses (if any) £ ✓ : When received, 102

V. Lockney. C. P. Stuart.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 12 JUN. 1923

Assigned



© 2020

Lloyd's Register Foundation