

REPORT ON BOILERS.

No. 79568

Date of writing Report Aug 13th 1925 When handed in at Local Office Aug 13th 1925 Port of NEWCASTLE-ON-TYNE

No. in Reg. Book 4155 Survey held at Newcastle-on-Tyne Date, First Survey Jan 28th 1925 Last Survey Sept 2nd 1925

on the steel screw steamer "Jurickmoor" (Number of Visits 70) Tons { Gross 4400 Net 2750

Master South Shields Built at Newcastle-on-Tyne By whom built J. Readhead & Sons Lim Yard No. 480 When built 1925

Engines made at South Shields By whom made J. Readhead & Sons Lim Engine No. 480 When made 1925

Boilers made at South Shields By whom made J. Readhead & Sons Lim Boiler No. 480 When made 1925

Nominal Horse Power 460 Owners Moore Line Lim Port belonging to London

Reg N. H. P. = 463

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Sand Colville & Sons Lim. Leighton Patent Plate Co (Letter for Record 12 (7))

Total Heating Surface of Boilers 6450 ft² Is forced draught fitted Yes Coal or Oil fired Coal

No. and Description of Boilers 3 single ended Multitubular Working Pressure 180 lbs

Tested by hydraulic pressure to 320 Date of test 12.6.25 No. of Certificate 9925 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 54.6 ft² No. and Description of safety valves to each boiler 2 Spring loaded

Area of each set of valves per boiler { per Rule 6.90" as fitted 10.320" Pressure to which they are adjusted 180 Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No donkey boiler

Smallest distance between boilers or uptakes and bunkers or woodwork 2-3" Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 2-9" Is the bottom of the boiler insulated No

Largest internal dia. of boilers 14-3 1/8" Length 11-9" Shell plates: Material steel Tensile strength 28-32

Thickness 1 3/16" Are the shell plates welded or flanged No Description of riveting: circ. seams { end double lap inter. 3 1/8"

long. seams butt straps Diameter of rivet holes in { circ. seams 1 1/4" long. seams 1 1/4" Pitch of rivets { 8 1/8"

Percentage of strength of circ. end seams { plate 67.8 rivets 43.9 Percentage of strength of circ. intermediate seam { plate 85.5 rivets 92.4

Percentage of strength of longitudinal joint { plate 85.5 rivets 92.4 combined 89.6 Working pressure of shell by Rules 182.8

Thickness of butt straps { outer 1 5/16" inner 1 7/16" No. and Description of Furnaces in each Boiler 3. Leighton's

Material steel Tensile strength 26-30 Smallest outside diameter 3-4 1/16"

Length of plain part { top 17 1/2" bottom 32" Thickness of plates { crown 17 1/2" bottom 32" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.e. bottom Working pressure of furnace by Rules 188 lbs

End plates in steam space: Material steel Tensile strength 26-30 Thickness 1 3/16" Pitch of stays 1-9 1/2" x 1-7 1/2"

How are stays secured Double nuts & outside washers Working pressure by Rules 185.6 lbs

Tube plates: Material { front steel back " Tensile strength { 26-30 Thickness { 1 3/16" 3/4"

Mean pitch of stay tubes in nests 5 7/16" Pitch across wide water spaces 14" Working pressure { front 246 lbs back 196 "

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

at centre 8 1/2" x 1 3/4" Length as per Rule 2-7 1/2" Distance apart 10 1/2" No. and pitch of stays

in each 2-9 1/2" Working pressure by Rules 206 Combustion chamber plates: Material steel

Tensile strength 26-30 Thickness: Sides 23 1/32" Back 1 1/16" Top 23 1/32" Bottom 3/4"

Pitch of stays to ditto: Sides 10 x 9 1/4" Back 9 1/2" x 9 1/4" Top 10 1/2" x 9 1/2" Are stays fitted with nuts or riveted over Nuts fitted, except outside of main C.C. side stays.

Working pressure by Rules 181 Front plate at bottom: Material steel Tensile strength 26-30

Thickness 1 3/16" Lower back plate: Material steel Tensile strength 26-30 Thickness 1 3/16"

Pitch of stays at wide water space 14" x 9 1/4" Are stays fitted with nuts or riveted over Nuts fitted.

Working Pressure 213 Main stays: Material steel Tensile strength 28-32

Diameter { At body of stay, 3 1/4" No. of threads per inch 6 Area supported by each stay 419 sq"

Working pressure by Rules 201 lbs Screw stays: Material Iron Tensile strength 26-30

Diameter { At turned off part, 2" x 1 7/8" No. of threads per inch 9 Area supported by each stay 92.5-99.4

Working pressure by Rules *214* Are the stays drilled at the outer ends *no* Margin stays: Diameter { At turned off part, *2"* or Over threads *2"* ✓
 No. of threads per inch *9* ✓ Area supported by each stay *129.4 sq"* Working pressure by Rules *191 lbs*
 Tubes: Material *Iron* ✓ External diameter { Plain *3"* ✓ Stay *3"* ✓ Thickness { *9/16"* ✓ *7/16"* ✓ No. of threads per inch *9* ✓
 Pitch of tubes *4 1/2" x 4 1/2"* ✓ Working pressure by Rules *190 lbs* Manhole compensation: Size of opening in shell plate *16" x 12"* ✓ Section of compensating ring *2'-8" x 2'-4"* ✓ No. of rivets and diameter of rivet holes *28 - 1 1/4"* ✓
 Outer row rivet pitch at ends *6 3/4"* ✓ Depth of flange if manhole flanged - Steam Dome: Material *Iron* ✓
 Tensile strength - Thickness of shell - Description of longitudinal joint -
 Diameter of rivet holes - Pitch of rivets - Percentage of strength of joint { Plate *-* stays *-*
 Internal diameter - Working pressure by Rules - Thickness of crown - No. and diameter of stays -
 How connected to shell - Inner radius of crown - Working pressure by Rules -
 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 *Worm System No. 8-6* ✓ Manufacturers of { Tubes *James Lim Birmingham* ✓ Steel castings *-*
 Number of elements *147* Material of tubes *A. & steel* ✓ Internal diameter and thickness of tubes *17 3/4" x 2.5 3/4"*
 Material of headers *Wt. steel* Tensile strength *26-30* Thickness *1"* Can the superheater be shut off and the boiler be worked separately *no* Is a safety valve fitted to every part of the superheater which can be shut off from the boiler *yes*
 Area of each safety valve *3.1416 sq"* ✓ Are the safety valves fitted with easing gear *yes* ✓ Working pressure as per Rules *180* Pressure to which the safety valves are adjusted *185* Hydraulic test pressure: tubes *1510 sq"* Headers *540* castings *540* and after assembly in place *400 sq"* Are drain cocks or valves fitted to free the superheater from water where necessary *yes*
 Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with *yes*

The foregoing is a correct description,
W. P. Stewart Manufacturer.

Dates { During progress of work in shops - - } *for dates see other report* Are the approved plans of boiler and superheater forwarded herewith *yes* (If not state date of approval.)
 while { During erection on board vessel - - }
 building { } Total No. of visits *70*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *These boilers have been examined during construction & the materials and workmanship are good & in accordance with the approved plan & the requirements of the rules. On completion they were submitted to a hydraulic test of 320 lbs sq" & found tight & sound at that pressure.*

Survey Fee ... £ *see engine report* When applied for, 192
 Travelling Expenses (if any) £ : : When received, 192

L. Desket & *Mannie Pitton*
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 11 SEP 1925*

Assigned *See other report*

