Rpt. 5a.

REPORT ON BOILERS. No. 79198

Received at London Office 15 MAI 1925
NEWCASTLE-ON-TYNE

Date of writing Report 9 May 1925 When handed in at Local Office 13 May 1925 Port of

No. in Reg. Book. Survey held at Newcastle on Tyne Date, First Survey 30/12/24 Last Survey 7th May 1925

(Number of Visits ✓)

on the ~~Steel twin screw~~ Steamer SAMBUR Tons Gross 450 Net 300

Master Built at Walker By whom built S. H & W. R. Ld Yard No. 1206 When built 1925.

Engines made at Walker By whom made S. H. & W. R. Ld. Engine No. 1206 When made 1925.

Boilers made at Walker By whom made Swan. Hunter & Wigham Richardson Ltd Boiler No. 1206 When made 1925.

Nominal Horse Power 226 ✓ Owners Great Western Railway Port belonging to London

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

Manufacturers of Steel John Spencer & Son. Newburn-on-Tyne. ✓ (Letter for Record ~~S~~ (r) ✓

Total Heating Surface of Boilers 3464 ☐ft ✓ Is forced draught fitted yes ✓ Coal or Oil fired oil ✓

No. and Description of Boilers 2 Scotch S.E. 2SB. ✓ **Working Pressure** 185 lbs/☐" ✓

Tested by hydraulic pressure to 328 lbs ✓ Date of test 1. 4. 25. ✓ No. of Certificate 9909 ✓ Can each boiler be worked separately yes ✓

Area of Firegrate in each Boiler oil fired ✓ No. and Description of safety valves to each boiler 2 D.S. 2½" dia. High lift. ✓

Area of each set of valves per boiler { per Rule 13 ☐" ✓ / as fitted 9.82 ✓ approved. } Pressure to which they are adjusted 185 lbs/☐" ✓ 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 5'-0" ✓ 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 yes. ✓

Largest internal dia. of boilers 13'-4" ✓ (Mean Length) 11'-0" ✓ **Shell plates:** Material Steel ✓ Tensile strength 30-34 tons. ✓

Thickness 1 1/16" ✓ Are the shell plates welded or flanged no ✓ Description of riveting: circ. seams { end D.R.L. ✓ / inter. ✓ }

long. seams T.R.D.B.S. ✓ Diameter of rivet holes in { circ. seams 1 3/16" ✓ / long. seams 1 1/8" ✓ } Pitch of rivets { 3.72". ✓ / 7 13/16". ✓ }

Percentage of strength of circ. end seams { plate 68.07 ✓ / rivets 42.96 ✓ } Percentage of strength of circ. intermediate seam { plate ✓ / rivets ✓ }

Percentage of strength of longitudinal joint { plate 85.6 ✓ / rivets 86.06 ✓ / combined 88.41 ✓ } Working pressure of shell by Rules 186 lbs/☐" ✓

3 of

Thickness of butt straps { outer 13/16" ✓ / inner 15/16" ✓ } **No. and Description of Furnaces in each Boiler** 3. Morison. ✓

Material Steel ✓ Tensile strength 26-30 tons ✓ Smallest outside diameter 3'-2 5/8". ✓

Length of plain part { top ✓ / bottom ✓ } Thickness of plates { crown ½" ✓ / bottom ✓ } Description of longitudinal joint weld. ✓

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 186 lbs/☐" ✓

End plates in steam space: Material Steel ✓ Tensile strength 26-30 tons Thickness 1 5/32" ✓ Pitch of stays 18" x 18¼" ✓

How are stays secured two washers & two nuts. ✓ Working pressure by Rules 189 lbs/☐" ✓

Tube plates: Material { front Steel ✓ / back Steel ✓ } Tensile strength { 26-30 tons. ✓ / 26-30 tons. ✓ } Thickness { 31/32" ✓ / ¾" ✓ }

Mean pitch of stay tubes in nests 9 3/8" ✓ Pitch across wide water spaces 13½" ✓ Working pressure { front 196 lbs/☐" ✓ / back 228 lbs/☐" ✓ }

Girders to combustion chamber tops: Material steel ✓ Tensile strength 28-32 tons ✓ Depth and thickness of girder at centre 8 5/8" x 1¼" ✓ Length as per Rule 31 19/32" ✓ Distance apart 8½" ✓ No. and pitch of stays in each 2. 9¾". ✓ Working pressure by Rules 188 lbs/☐" ✓ **Combustion chamber plates:** Material steel ✓

Tensile strength 26-30 tons. ✓ Thickness: Sides 11/16" ✓ Back 21/32" ✓ Top 11/16" ✓ Bottom 11/16" ✓

Pitch of stays to ditto: Sides 8" x 9 ½" ✓ Back 8¾" x 9" ✓ Top 9¾" x 8½" ✓ Are stays fitted with nuts or riveted over nuts fitted. ✓

Working pressure by Rules 190 lbs/☐" ✓ **Front plate at bottom:** Material steel ✓ Tensile strength 26-30 tons/☐" ✓

Thickness 31/32" ✓ **Lower back plate:** Material Steel ✓ Tensile strength 26-30 tons. ✓ Thickness 27/32" ✓

Pitch of stays at wide water space 13½" x 9" ✓ Are stays fitted with nuts or riveted over nuts fitted. ✓

Working Pressure 210 lbs/☐" ✓ **Main stays:** Material Steel ✓ Tensile strength 28-32 tons. ✓

Diameter { At body of stay, or Over threads 2 7/8" & 3" ✓ } No. of threads per inch 6 ✓ Area supported by each stay 18" x 18¼" ✓

Working pressure by Rules 186 lbs/☐" ✓ **Screw stays:** Material Special iron ✓ Tensile strength 22-26 tons. ✓

Diameter { At turned off part, or Over threads 1 5/8", 1¾", 1 7/8" ✓ } No. of threads per inch 9 ✓ Area supported by each stay 78.7, 82.9, 100.1 ☐" ✓

Working pressure by Rules 192 lbs/□" *Are the stays drilled at the outer ends* No. *Margin stays: Diameter* { *At turned off part, or Over threads* 1 7/8" ✓

No. of threads per inch 9 ✓ *Area supported by each stay* 100·1 □" ✓ *Working pressure by Rules* 212 lbs/□" ✓

Tubes: *Material* Iron ✓ *External diameter* { *Plain* 2½" ✓ *Stay* 2½" } *Thickness* { 8 W.G. ✓ ¼" ✓ } *No. of threads per inch* 9 ✓

Pitch of tubes 3¾ ✓ *Working pressure by Rules* 206 lbs/□" ✓ **Manhole compensation:** *Size of opening in shell plate* 20"×16" ✓ *Section of compensating ring* 3" × 3" × 1/16" ✓ *No. of rivets and diameter of rivet holes* 32. 1⅜" ✓

Outer row rivet pitch at ends 9⅝ ✓ *Depth of flange if manhole flanged* 2½" ✓ **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* ..... *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 none *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* yes. ✓

FOR TWAN, HUNTER & WIGHAM RICHARDSON, LTD.

The foregoing is a correct description,

G J Duncan DIRECTOR.

Manufacturer.

Dates of Survey while building { *During progress of work in shops* - - } ..... { *During erection on board vessel* - - - } See marking report

Are the approved plans of boiler and superheater forwarded herewith ..... (If not state date of approval.)

Total No. of visits .....

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

Re Boilers built under Special Survey, the material and workmanship found good and efficient.

Boilers Satisfactorily fitted on board the Vessel. tested under Steam and found efficient

Their Safety Valves adjusted under Steam for a working pressure of 185 lbs □"

The Boilers are fitted for oil fuel under forced draught. Flash point of oil to be above 150° F.

Survey Fee ... ... £ : : } *When applied for,* 192

Travelling Expenses (if any) £ See Michy Report : : } *When received,* 192

L. G. Shallcross

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 19 MAY 1925

Assigned .....