

REPORT ON BOILERS.

No. 42821.

Received at London Office WED. JUN. 20 1923

Date of writing Report 14th June, 1923 When handed in at Local Office 14th June 1923 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 14. 3. 1923 Last Survey 14. 6. 1923

Reg. Book. Boilers No. B 318. Non propelling Bucket Dredger "Persevere" (Number of Visits 9) Gross 582 Tons Net 515

Master Port-Glasgow Built at Port-Glasgow By whom built Ferguson Bros. Ltd. Yard No. 265 When built 1923

Engines made at Port-Glasgow By whom made Ferguson Bros. Ltd. Engine No. 265 When made 1923

Boilers made at Glasgow By whom made D. Rowan & Co., Ltd. Boiler No. B 318 When made 1923

Nominal Horse Power 107 Owners The Commissioners for the Harbours and Docks of Leith Port belonging to Leith

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel The Port Talbot Steel Co. Ltd. (Letter for Record S.)

Total Heating Surface of Boilers 2358 sq. ft. Is forced draught fitted no Coal or Oil fired no

No. and Description of Boilers Two Single Ended Working Pressure 160 lbs./sq. in.

Tested by hydraulic pressure to 290 lbs./sq. in. Date of test 4.6.23 No. of Certificate 16268 Can each boiler be worked separately no

Area of Firegrate in each Boiler 35.75 sq. ft. No. and Description of safety valves to each boiler no

Area of each set of valves per boiler { per Rule no as fitted no Pressure to which they are adjusted no Are they fitted with easing gear no

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 no Is oil fuel carried in the double bottom under boilers no

Smallest distance between shell of boiler and tank top plating no Is the bottom of the boiler insulated no

Largest internal dia. of boilers 11'-5 5/32" Length 10'-6" Shell plates: Material Steel Tensile strength 28/32 tons/sq. in.

Thickness 27/32" Are the shell plates welded or flanged no Description of riveting: circ. seams { end D.R. Lap inter no

long. seams T.R.D.B.S. Diameter of rivet holes in { circ. seams 15/16" long. seams 15/16" Pitch of rivets { 2.61" 6 1/16"

Percentage of strength of circ. end seams { plate 64.1 rivets 51.5 Percentage of strength of circ. intermediate seam { plate 86 rivets 94.24 combined 89.81

Percentage of strength of longitudinal joint { plate 86 rivets 94.24 combined 89.81 Working pressure of shell by Rules 160 lbs./sq. in.

Thickness of butt straps { outer 2 1/32" inner 2 1/32" No. and Description of Furnaces in each Boiler Two Deighton's

Material Steel Tensile strength 26/30 tons/sq. in. Smallest outside diameter 3'-3 29/32"

Length of plain part { top no bottom no Thickness of plates { crown 29/64" bottom 29/64" Description of longitudinal joint weld.

Dimensions of stiffening rings on furnace or c.c. bottom no Working pressure of furnace by Rules 162 lbs./sq. in.

End plates in steam space: Material Steel Tensile strength 26/30 tons Thickness 29/32" Pitch of stays 14 1/2" x 16"

How are stays secured D. nuts Working pressure by Rules 161 lbs./sq. in.

Tube plates: Material { front Steel back Steel Tensile strength { 26/30 tons Thickness { 3/4"

Mean pitch of stay tubes in nests 10.27 Pitch across wide water spaces 14" Working pressure { front 165 lbs./sq. in. back 191 lbs./sq. in.

Girders to combustion chamber tops: Material Steel Tensile strength 28/32 tons Depth and thickness of girder at centre 7 1/2" x 2 C 3/4" Length as per Rule 2'-7 5/8" Distance apart 8 1/4" No. and pitch of stays in each 2 C 10" Working pressure by Rules 166 lbs./sq. in. Combustion chamber plates: Material Steel

Tensile strength 26/30 tons Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 5/8"

Pitch of stays to ditto: Sides 8 1/4" x 10" Back 8 7/8" x 9 1/2" Top 8 7/8" x 10" Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules 160 lbs./sq. in. Front plate at bottom: Material Steel Tensile strength 26/30 tons

Thickness 13/16" Lower back plate: Material Steel Tensile strength 26/30 tons Thickness 23/32"

Pitch of stays at wide water space 13 1/4" Are stays fitted with nuts or riveted over Nuts

Working Pressure 163 lbs./sq. in. Main stays: Material Steel Tensile strength 28/32 tons

Diameter { At body of stay, 2 1/4" No. of threads per inch 6 Area supported by each stay 232 sq. in.

Working pressure by Rules 185 lbs./sq. in. Screw stays: Material Steel Tensile strength 26/30 tons

Diameter { At turned off part, 1 5/8" No. of threads per inch 10 Area supported by each stay 84.3 sq. in.

Working pressure by Rules $180 \frac{lb}{sq. in.}$ Are the stays drilled at the outer ends ☒ No Margin stays: Diameter { At turned off part, $1 \frac{3}{4}"$ or Over threads $1 \frac{3}{4}"$ }

No. of threads per inch 10 Area supported by each stay $100 sq. in.$ Working pressure by Rules 181.

Tubes: Material *Iron* External diameter { Plain $3 \frac{1}{4}"$ Stay $3 \frac{1}{4}"$ } Thickness { $\frac{1}{4}"$ $\frac{5}{16}"$ } No. of threads per inch 9

Pitch of tubes $4 \frac{3}{8}" \times 4 \frac{1}{2}"$ Working pressure by Rules $180 \frac{lb}{sq. in.}$ Manhole compensation: Size of opening in shell plate $19 \frac{1}{4}" \times 15 \frac{1}{4}"$ Section of compensating ring $7 \frac{1}{4}" \times \frac{27}{32}"$ No. of rivets and diameter of rivet holes 32 C $1 \frac{1}{16}"$ dia.

Outer row rivet pitch at ends $7 \frac{3}{4}"$ Depth of flange if manhole flanged *Comp. Ring Flanged 3"* 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 —

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 ☒ —

Annual Survey Request
Sunderland LA. 19-4-1923

The foregoing is a correct description,
for David Rowan & Co. Ltd.
Arch^d W. Grierson Manufacturer.

Dates of Survey { During progress of work in shops - - } 1923 Mar 14, 21, 27, Apr 18, May 18, 23, 31, June 4, 11, 18
while building { During erection on board vessel - - }

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

Total No. of visits 9

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *These Boilers have been built under Special Survey in accordance with the Rules and approved Plan; the Materials and workmanship are good.*

Survey Fee ... £ 15 : 14 : 0 When applied for, 20/9/1923

Travelling Expenses (if any) £ : : When received, 23/10/23

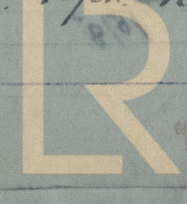
A. B. Forster
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 19 JUN 1923

Assigned TRANSMIT TO LONDON

GLASGOW 2-OCT 1923

See Gen. Rpt. No. 18129



Lloyd's Register
Foundation