

REPORT ON BOILERS.

No. 19522

Received at London Office

15 MAR 1933

Date of writing Report 28.11.32 When handed in at Local Office 10th MARCH 1933 Port of GreenockNo. in Survey held at Greenock Date, First Survey 19th September 1932 Last Survey 28th November 1932

Sewage Sludge T/S's "Mancunium" (Number of Visits 24.) Gross 1285.65 Tons Net 650.12

Master Built at Glasgow By whom built Ferguson Bros Ltd Yard No. 205 When built 1933

Engines made at Glasgow By whom made Ferguson Bros Ltd Engine No. 305 When made 1933

Boilers made at Greenock By whom made John & Kneid Ltd Boiler No. 208 When made 1933

Nominal Horse Power 206 Owners Manchester Corporation Port belonging to Manchester

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

Manufacturers of Steel Lancashire Applied & Co (Letter for Record \$)

Total Heating Surface of Boilers 39384 Is forced draught fitted No Coal Oil fired Coal

No. and Description of Boilers 2 Single Ended 288 Working Pressure 180

Tested by hydraulic pressure to 320 Date of test 28.11.32 No. of Certificate 2014 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 64.55 No. and Description of safety valves to each boiler 2 Cochran Improved High Lift

Area of each set of valves per boiler 6.31 Pressure to which they are adjusted 185 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 4'-3" Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 24" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 14.7 3/16 Length 10'-6" Shell plates: Material S Tensile strength 29.33

Thickness 13/16 Are the shell plates welded or flanged Description of riveting: circ. seams end 3.475 inter. 8.116

long. seams TRDBS Diameter of rivet holes in circ. seams 1 1/4 Pitch of rivets 8 1/16

Percentage of strength of circ. end seams 64.2 46.9 85.24 Percentage of strength of circ. intermediate seam 85.9 87.72

Percentage of strength of longitudinal joint 29/32 Working pressure of shell by Rules 184

Thickness of butt straps 1 1/32 No. and Description of Furnaces in each Boiler 3 Deighton 30%

Material S Tensile strength 26-30 Smallest outside diameter 3'-10 3/16

Length of plain part 3 19/32 Description of longitudinal joint weld

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 187

End plates in steam space: Material S Tensile strength 26-30 Thickness 17/32 Pitch of stays 19 7/8 x 19 1/4

How are stays secured DN washers Working pressure by Rules 188

Tube plates: Material S Tensile strength 26-30 Thickness 3/4

Mean pitch of stay tubes in nests 10'19 Pitch across wide water spaces 14 1/4 Working pressure 201

Girders to combustion chamber tops: Material S Tensile strength 29-33 Depth and thickness of girder 10 1/4

at centre 9 1/2 x 3 1/4 (2) Length as per Rule 2' 9 5/8 Distance apart 10 1/4 No. and pitch of stays 8 1/8

in each 3 at 8 1/8 Working pressure by Rules 183 Combustion chamber plates: Material S

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

Pitch of stays to ditto: Sides 8 1/8 x 10 1/4 Back 9 1/4 x 9 5/8 Top 8 1/8 x 10 1/4 Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules 188 Front plate at bottom: Material S Tensile strength 26-30

Thickness 7/8 Lower back plate: Material S Tensile strength 26-30 Thickness 25/32

Pitch of stays at wide water space 14 Are stays fitted with nuts or riveted over Nuts

Working Pressure 187 Main stays: Material S Tensile strength 28-32

Diameter At body of stay, or Over threads 3 1/8 No. of threads per inch 6 Area supported by each stay 404.25

Working pressure by Rules 182 Screw stays: Material S Tensile strength 26-30

Diameter At turned off part, or Over threads 1 3/4 No. of threads per inch 9 Area supported by each stay 87.8

Working pressure by Rules **202** Are the stays drilled at the outer ends **910** Margin stays: Diameter **17/8"**
 No. of threads per inch **9** Area supported by each stay **107.50"** Working pressure by Rules **200**
 Tubes: Material **910W** External diameter **3 1/4"** Thickness **9WG 11/32 9/32** No. of threads per inch **9**
 Pitch of tubes **4 1/2 x 4 3/8"** Working pressure by Rules **197** Manhole compensation: Size of opening in
 shell plate **16 1/2 x 20 1/2** Section of compensating ring **3 1/4 x 32 1/4 x 19/32"** No. of rivets and diameter of rivet holes **38 at 1 1/2"**
 Outer row rivet pitch at ends **8 3/4"** Depth of flange if manhole flanged **3 1/4"** Steam Dome: Material
 Tensile strength Thickness of shell Description of longitudinal joint
 Diameter of rivet holes Pitch of rivets Percentage of strength of joint
 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
 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 22 inclusive for boilers been complied with

The foregoing is a correct description,
 For **JOHN G. KINCAID & CO. LIMITED.**
McCallister Director/Manufacturer.

Dates of Survey while building
 During progress of work in shops - (1932) Sept. 1-9, 13, 16, 21, 23, 27, 30, Oct. 4, 7, 11, 14, 18, 21, 25, 28
 During erection on board vessel - Oct. 1, 3, 8, 11, 15, 18, 25, 28
 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) **Yes**
 Total No. of visits **24**

Is this Boiler a duplicate of a previous case **910** If so, state Vessel's name and Report No. **-**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
These boilers have been built under Special Survey in accordance with the approved plans. The workmanship and material are of good quality. They have now been securely fitted on board. This Report accompanies that of the Machinery

Survey Fee ... **£ 25 : 13 : -** When applied for, **30th NOVEMBER 1932**
 Travelling Expenses (if any) **£ - : - : -** When received, **29th DECEMBER 1932**

W. Gordon-Maclean
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 14 MAR 1933**
 Assigned *See accompanying machinery report.*

Rpt. 13.
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 Date of writing
 No. in Su
 Reg. Book.
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 If alternating
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