

REPORT ON BOILERS.

No. 45811

See Glasgow Report No. 451920

Received at London Office 14 JUL 1926

1 SEP 1926

Date of writing Report

192

When handed in at Local Office

9.7.1926

Port of

Glasgow

No. in Surrey held at Reg. Book.

Glasgow

Date, First Survey

11.5.26

No Last Survey

5.7.1926

(Number of Visits)

Gross

691

Net

311.

Master

Built at

Paisley

By whom built

John Fullerton & Co. Ltd

Yard No.

276

When built

1926

Engines made at

Hydebank

By whom made

Aitchison Blair Ltd

Engine No.

159

When made

1926

Boilers made at

Glasgow

By whom made

D. Rowan & Co. Ltd

Boiler No.

339

When made

1926

Nominal Horse Power

101.

Owners

H. Morrison (Shipping) Ltd

Port belonging to

London.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Gutehoffnungshütte A.G. of Oberhausen (Letter for Record (S))

Total Heating Surface of Boilers 1853 sq ft Is forced draught fitted no Coal or Oil fired

No. and Description of Boilers one single ended marine Working Pressure 180

Tested by hydraulic pressure to 320 Date of test 5-7-26 No. of Certificate 17168 Can each boiler be worked separately -

Area of Firegrate in each Boiler 532 sq ft No. and Description of safety valves to each boiler 2 - Spring loaded

Area of each set of valves per boiler per Rule 9.3 sq ft as fitted 11.878 sq ft Pressure to which they are adjusted 180 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 Well clear Is oil fuel carried in the double bottom under boilers no

Smallest distance between shell of boiler and tank top plating Open floors Is the bottom of the boiler insulated -

Largest internal dia. of boilers 14'-0" Length 10'-6" Shell plates: Material Steel Tensile strength 28-30 tons

Thickness 1 5/32" Are the shell plates welded or flanged no Description of riveting: circ. seams end 19T

long. seams DBS. TR Diameter of rivet holes in circ. seams 1 3/16" Pitch of rivets 3-24"

Percentage of strength of circ. end seams plate 63.3 rivets 48.7 Percentage of strength of circ. intermediate seam plate 85.4 rivets 95.4 combined 89.9

Percentage of strength of longitudinal joint plate 85.4 rivets 95.4 combined 89.9 Working pressure of shell by Rules 180

Thickness of butt straps outer 7/8" inner 1" No. and Description of Furnaces in each Boiler Three Morrison corrugated

Material Steel Tensile strength 26-30 tons Smallest outside diameter 40"

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

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 180

End plates in steam space: Material steel Tensile strength 26-30 tons Thickness 1 5/32" Pitch of stays 14 1/2 x 19 & 18 x 19

How are stays secured DN. Working pressure by Rules 181

Tube plates: Material steel Tensile strength 26-30 tons Thickness 27/32" 23/32"

Mean pitch of stay tubes in nests 10" Pitch across wide water spaces 13 7/8" Working pressure front 181 back 184

Girders to combustion chamber tops: Material steel Tensile strength 28-30 tons Depth and thickness of girder

at centre 2 @ 7 9/16" x 7/8" Length as per Rule 30.625 Distance apart 10 1/4" No. and pitch of stays

in each 2 @ 9 3/4" Working pressure by Rules 180 Combustion chamber plates: Material steel

Tensile strength 26-30 tons Thickness: Sides 23/32" Back 21/32" Top 23/32" Bottom 23/32"

Pitch of stays to ditto: Sides 9 3/4" x 10 1/4" Back 8 1/2" x 9 1/4" Top 9 3/4" x 10 1/4" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 190 Front plate at bottom: Material steel Tensile strength 26-30 tons

Thickness 27/32" Lower back plate: Material steel Tensile strength 26-30 tons Thickness 3/4"

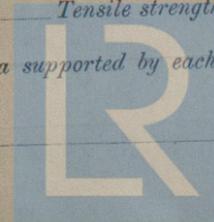
Pitch of stays at wide water space 13 1/8" x 8 1/2" Are stays fitted with nuts or riveted over nuts

Working Pressure 186 Main stays: Material steel Tensile strength 28-30 tons

Diameter At body of stay, 2 3/4" No. of threads per inch 6 Area supported by each stay 342 sq in

Working pressure by Rules 191 Screw stays: Material steel Tensile strength 26-30 tons

Diameter At turned off part, 1 5/8" No. of threads per inch 9 Area supported by each stay 78.6 sq in



Working pressure by Rules 194 Are the stays drilled at the outer ends *no* Margin stays: Diameter { At turned off part, or Over threads } 1 3/4" Working pressure by Rules 191

No. of threads per inch 9 Area supported by each stay 950" Thickness { 9 W.G. 1/4" 5/16" 3/8" } No. of threads per inch 9

Tubes: Material *Iron* External diameter { Plain 3 1/4" Stay 3 1/4" } Working pressure by Rules 180 Manhole compensation: Size of opening in shell plate 15 1/2" x 19 1/2" Section of compensating ring 7 1/4" x 1 5/8" No. of rivets and diameter of rivet holes 36 @ 1 1/4"

Pitch of tubes 4 3/8" x 4 1/2" Working pressure by Rules 180 Manhole compensation: Size of opening in shell plate 15 1/2" x 19 1/2" Section of compensating ring 7 1/4" x 1 5/8" No. of rivets and diameter of rivet holes 36 @ 1 1/4"

Outer row rivet pitch at ends 8 9/16" Depth of flange if manhole flanged 3" Steam Dome: Material *none*

Tensile strength *etc* 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

Number of elements Material of tubes Manufacturers of { Tubes Steel castings } 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

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

Dates of Survey { During progress of work in shops -- } 1916. May 11. 20. 26. June 1 & 22.
{ During erection on board vessel -- } July 2 & 5.
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
Total No. of visits 8

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

The workmanship and materials are good.
The boiler has been constructed under special survey, in accordance with the Rules
This boiler has been properly fitted on board and its safety valves adjusted under steam, washers P 9/32" S 9/32".

Survey Fee £ 12 : 8 : ✓ When applied for, 12. 7. 1926
Travelling Expenses (if any) £ : : ✓ When received, 16. 7. 1926

S. C. Davis & J. J. Nicholas.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 13 JUL 1926
Assigned TRANSMIT TO LONDON

H.M.C.S. No on
Glasgow 45920.



a.l.
9/7/26