

29 DEC 1927

Rpt. 5a.

REPORT ON BOILERS.

No. 47279

Received at London Office

16 NOV 1927

Date of writing Report 19 Dec 1927 When handed in at Local Office 14.11.27 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 16.9.27 Last Survey 24.10.1927

on the S.S. City of London (Number of Visits 7) Gross Tons Net

Built at Buntisland By whom built Buntisland SBCo Yard No. 145 When built 1927

Engines made at Glasgow By whom made Wm Beardmore & Co Ltd Engine No. 641 When made 1927

Boilers made at Glasgow By whom made David Rowan & Co Ltd Boiler No. 353 When made 1927

Nominal Horse Power 109 Owners Brussels S.S. Co. Ltd Port belonging to London

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Wapping plate - Wm Beardmore regd. Ld. Glasgow - Scottish D&S Co
Vereinigte Stahlwerke A. S. Aug. Thyssen-Hütte of Mulheim Ruhr (Letter for Record (S))

Total Heating Surface of Boilers 1955 sq ft Is forced draught fitted no Coal or Oil fired

No. and Description of Boilers One single ended Working Pressure 180

Tested by hydraulic pressure to 320 Date of test 27.10.27 No. of Certificate 17658 Can each boiler be worked separately

Area of Firegrate in each Boiler 63 sq ft No. and Description of safety valves to each boiler 2 - Direct Spring

Area of each set of valves per boiler {per Rule 12.5 as fitted 14.12 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 none fitted

Smallest distance between boilers or uptakes and bunkers or woodwork 10" Is oil fuel carried in the double bottom under boilers no

Smallest distance between shell of boiler and tank top plating Single bottom 12" Is the bottom of the boiler insulated yes

Largest internal dia. of boilers 14'-6" Length 10'-6" Shell plates: Material steel Tensile strength 28-32 tons

Thickness 1 3/16" Are the shell plates welded or flanged no Description of riveting: circ. seams {end DR inter. -

Long. seams DBS, TR Diameter of rivet holes in {circ. seams F 1 3/16" B 1 3/16" Pitch of rivets {F 3.2" B 3.35" 8 3/4"

Percentage of strength of circ. end seams {plate F 62.8 B 64.6 rivets F 47.8 B 45.6 Percentage of strength of circ. intermediate seam {plate 85.7 rivets 90.9

Percentage of strength of longitudinal joint {plate 85.7 rivets 90.9 combined 89.6 Working pressure of shell by Rules 180

Thickness of butt straps {outer 5 1/4" inner 1 3/4" No. and Description of Furnaces in each Boiler Three Deighton: 3 C

Material steel Tensile strength 26-30 tons Smallest outside diameter 3'-1 3/32"

Length of plain part {top bottom Thickness of plates {crown 3 5/8" bottom 6 1/4" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 183

End plates in steam space: Material steel Tensile strength 26-30 tons Thickness 1 1/2" Pitch of stays 19 1/2" x 20 3/8"

How are stays secured WN Working pressure by Rules 182

Tube plates: Material {front steel back " Tensile strength {26-30 tons Thickness {27 1/2" 23 3/32"

Lean pitch of stay tubes in nests 10 1/4" Pitch across wide water spaces 13 7/8" Working pressure {front 183 back 180

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

At centre 2 @ 7 3/4" x 7 1/8" Length as per Rule 2'-8 3/8" Distance apart 9 1/2" No. and pitch of stays

In each 2 @ 10 3/8" Working pressure by Rules 184 Combustion chamber plates: Material steel

Tensile strength 26-30 tons Thickness: Sides 23 3/32" Back 21 3/32" Top 23 3/32" Bottom 25 3/32"

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

Working pressure by Rules 183 Front plate at bottom: Material steel Tensile strength 26-30 tons

Thickness 21 3/32" Lower back plate: Material steel Tensile strength 26-30 tons Thickness 3 1/4"

Pitch of stays at wide water space 13 7/8" Are stays fitted with nuts or riveted over nuts

Working Pressure 183 Main stays: Material steel Tensile strength 28-30 tons

Diameter {At body of stay, or Over threads No. of threads per inch 6 Area supported by each stay 4100"

Working pressure by Rules 227 Screw stays: Material steel Tensile strength 26-30 tons

Diameter {At turned off part, or Over threads 1 5/8" No. of threads per inch 9 Area supported by each stay 809"

012256-012264-0163

Working pressure by Rules 189 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 3/4 or Over threads 13/4
No. of threads per inch 9 Area supported by each stay 98.5 sq. in. Working pressure by Rules 184
Tubes: Material Iron External diameter { Plain 3 1/2 Stay 3 1/2 Thickness { 9 w.s. 3/16 No. of threads per inch 9
Pitch of tubes 4 1/2 x 4 3/8 Working pressure by Rules 180 Manhole compensation: Size of opening
shell plate 15 1/2 x 19 1/2 Section of compensating ring 7 1/2 x 1 1/2 No. of rivets and diameter of rivet holes 32 @ 1 5/16
Outer row rivet pitch at ends 9 Depth of flange if manhole flanged 3 Steam Dome: Material none
Tensile strength 241 Thickness of shell 1/2 Description of longitudinal joint
Diameter of rivet holes 1 1/2 Pitch of rivets 1 1/2 Percentage of strength of joint { Plate Rivets
Internal diameter 28 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

The foregoing is a correct description,
For David Rowan & Co. Ltd. Manufactured by
Arch. W. Grierson

Dates of Survey { During progress of work in shops - 1927 Sep 16-27 Oct 12-21 24-26-27 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
while building { During erection on board vessel - - - - - Total No. of visits 7

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
The materials and workmanship are good.
The boiler has been constructed under Special Survey in accordance with the Rules.
It will be forwarded to Burntisland to be fitted in the vessel.
The boiler has been securely fitted on board & examined under steam & found in order

Survey Fee ... £ 13 : - :
Travelling Expenses (if any) £ : :
When applied for, 14.11.1927
When received, 14.1.1928

Clive Bell
S. Davis.
Engineer Surveyor to Lloyd's Register of Shipping.