

REPORT ON BOILERS.

Received at London Office 5 AUG 1936

Date of writing Report 19 When handed in at Local Office 3. 8. 1936 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 17. 12. 35 Last Survey 29. 7. 1936

on the New steel S/S TREWELLARD (Number of Visits 75) Gross 5201 Tons Net 3076

Builder Built at Port Glasgow By whom built Lithgows Ltd Yard No. 883 When built 1936

Engines made at Glasgow By whom made David Rowan & Co Ltd Engine No. 989 When made 1936

Boilers made at Glasgow By whom made David Rowan & Co Ltd Boiler No. 989 When made 1936

Nominal Horse Power 434 Owners Hain SS Co Port belonging to London

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Plates by steel b° of Scotland Ltd Stay by bolchilles Ltd (Letter for Record (r) ✓)

Total Heating Surface of Boilers 1390 sq ft Is forced draught fitted yes Coal or Oil fired coal

No. and Description of Boilers one single ended Working Pressure 230

Tested by hydraulic pressure to 395 Date of test 9-4-36 No. of Certificate 19103 Can each boiler be worked separately -

Area of Firegrate in each Boiler 40 sq ft No. and Description of safety valves to each boiler 2 pilot spring, improved high lift.

Area of each set of valves per boiler {per Rule 3.545 as fitted 4.8} Pressure to which they are adjusted 235 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 18" Is oil fuel carried in the double bottom under boilers no

Smallest distance between shell of boiler and tank top plating 2'-6" Is the bottom of the boiler insulated yes

Largest internal dia. of boilers 12'-6" Length 10'-6" Shell plates: Material steel Tensile strength 29-33 tons

Thickness 1 1/4" Are the shell plates welded or flanged no Description of riveting: circ. seams {end WR lap inter. -} long. seams UBS TR Diameter of rivet holes in {circ. seams F 1 3/16" B 1 9/16" Pitch of rivets {F 3.151 B 3.62 long. seams 1 9/16" 8 3/4"

Percentage of strength of circ. end seams {plate F 62.3 B 63.7 rivets F 44.6 B 47.6 Percentage of strength of circ. intermediate seam {plate - rivets -}

Percentage of strength of longitudinal joint {plate 85 rivets 91.8 combined 88.4 Working pressure of shell by Rules 231

Thickness of butt straps {outer 1 5/16" inner 1 1/16" No. and Description of Furnaces in each Boiler Two Weigh-ton

Material steel Tensile strength 26-30 tons Smallest outside diameter 3'-9 1/16"

Length of plain part {top - bottom -} Thickness of plates {crown 2 5/32" bottom 2 5/32" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom - Working pressure of furnace by Rules 255

End plates in steam space: Material steel Tensile strength 26-30 tons Thickness 1 1/8" Pitch of stays 17" x 14 1/2"

How are stays secured DN Working pressure by Rules 235

Tube plates: Material {front steel back -} Tensile strength {26-30 tons Thickness {F 1 5/16" B 2 5/32"

Mean pitch of stay tubes in nests 9.6" Pitch across wide water spaces 14" Working pressure {front 230 back 236

Girders to combustion chamber tops: Material steel Tensile strength 28-32 tons Depth and thickness of girder at centre 2 @ 7 1/2" x 7/8" Length as per Rule 2'-4 9/16" Distance apart 8 1/2" No. and pitch of stays in each 2 @ 9 1/4" Working pressure by Rules 231 Combustion chamber plates: Material steel

Tensile strength 26-30 tons Thickness: Sides 2 3/32" Back 2 1/32" Top 2 3/32" Bottom 2 1/32"

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

Working pressure by Rules 230 Front plate at bottom: Material steel Tensile strength 26-30 tons

Thickness 1 5/16" Lower back plate: Material steel Tensile strength 26-30 tons Thickness 2 1/32"

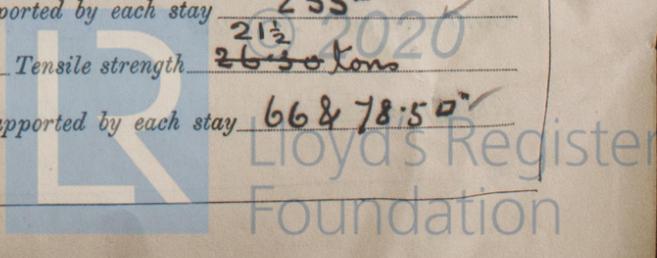
Pitch of stays at wide water space 13 1/2" Are stays fitted with nuts or riveted over nuts

Working Pressure 236 Main stays: Material steel Tensile strength 28-32 tons

Diameter {At body of stay, 2 3/4" Over threads -} No. of threads per inch 6 Area supported by each stay 255 sq in

Working pressure by Rules 256 Screw stays: Material Iron Tensile strength 26-30 tons

Diameter {At turned off part, 1 3/4" & 1 1/8" Over threads -} No. of threads per inch 9 Area supported by each stay 66 & 78.5 sq in



Working pressure by Rules 275 & 272 Are the stays drilled at the outer ends no Margin stays: Diameter At turned off part, or Over threads 2"

No. of threads per inch 9 Area supported by each stay 87 sq" Working pressure by Rules 285

Tubes: Material Iron External diameter Plain 3" Thickness 8 W.G. No. of threads per inch 9
 Stay 3"

Pitch of tubes 4 3/16" x 4 7/8" Working pressure by Rules 250 Manhole compensation: Size of opening in end shell plate 16 x 12 Section of compensating ring - No. of rivets and diameter of rivet holes -

Outer row rivet pitch at ends - Depth of flange if manhole flanged 4" Steam Dome: Material none

Tensile strength - Thickness of shell - Description of longitudinal joint -

Diameter of rivet holes 8/8 Pitch of rivets - Percentage of strength of joint Plate Rivets

Internal diameter 8 1/2 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 22 inclusive for boilers been complied with yes

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

Dates of Survey During progress of work in shops - - while building During erection on board vessel - - -

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

SEE ACCOMPANYING MACHINERY REPORT.

Total No. of visits -

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

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, satisfactorily fitted in the vessel and its safety valves adjusted under steam.

3/8/36

Survey Fee ... £ ... When applied for, 10

Travelling Expenses (if any) £ ... When received, 10

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

Committee's Minute GLASGOW 4 - AUG 1936

Assigned SEE ACCOMPANYING MACHINERY REPORT.

