

Rpt. 5a.

REPORT ON BOILERS.

No. 49449

24 JUL 1929

Received at London Office

Date of writing Report

192

When handed in at Local Office

22.7.1929

Port of

Glasgow

No. in Survey held at
Reg. Book.

Glasgow

Date, First Survey

15.11.28

Last Survey

10.7.1929

(Number of Visits

22

Gross

826.60

Tons

Net 409.73.

Master

Built at

Bowling

By whom built

Scott & Son

Yard No. 314

When built 1929

Engines made at

Bolchester

By whom made

Davey Payman & Co.

Engine No. 13451

When made 1920.

Boilers made at

Glasgow

By whom made

David Rowan & Co. Ltd

Boiler No. 360

When made 1929

Nominal Horse Power

Owners

John Stewart & Co.

Port belonging to

Glasgow.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Steel Company of Scotland Ltd.

(Letter for Record (S))

Total Heating Surface of Boilers

2102 sq ft

Is forced draught fitted

no

Coal or Oil fired

coal

No. and Description of Boilers

one single ended

I.S.B.

Working Pressure

180

Tested by hydraulic pressure to

320

Date of test

10.7.29

No. of Certificate

18373

Can each boiler be worked separately

Area of Firegrate in each Boiler

59 sq ft

No. and Description of safety valves to each boiler

two direct spring

Area of each set of valves per boiler

per Rule 13.45 sq ft

as fitted 14.12 sq ft

Pressure to which they are adjusted

Are they fitted with easing gear

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

Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

Largest internal dia. of boilers

15'-0"

Length

10'-6"

Shell plates: Material

Steel

Tensile strength

28-32 tons

Thickness

1 1/2"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end DR

long, seams

DRS. TR

Diameter of rivet holes in

circ. seams F 1 3/16" B 1 1/4"

Pitch of rivets

F 3.2" B 3.4"

Percentage of strength of circ. end seams

plate F 62.9 B 64

Percentage of strength of circ. intermediate seam

plate F 46.7 B 47.7

Percentage of strength of longitudinal joint

plate 86.01

rivets 86.8

combined 89.4

Working pressure of shell by Rules

180

Thickness of butt straps

outer 2 3/32"

inner 1 1/2"

No. and Description of Furnaces in each Boiler

Three Deighton

Material

steel

Tensile strength

26-30 tons

Smallest outside diameter

43.84"

Length of plain part

top

Thickness of plates

crown 3 5/64"

bottom 3 5/64"

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 1/2"

Pitch of stays

20 1/4" x 18 1/2"

How are stays secured

DN

Working pressure by Rules

188

Tube plates: Material

front steel

back "

Tensile strength

26-30 tons

Thickness

2 1/32"

4 1/64"

Mean pitch of stay tubes in nests

10.95"

Pitch across wide water spaces

13 7/8"

Working pressure

front 181

back 183

Girders to combustion chamber tops: Material

steel

Tensile strength

28-32 tons

Depth and thickness of girder

at centre

2 @ 7 5/8" x 7 1/8"

Length as per Rule

32.6"

Distance apart

9 1/8"

No. and pitch of stays

in each

2 @ 10 3/8"

Working pressure by Rules

182

Combustion chamber plates: Material

steel

Tensile strength

26-30 tons

Thickness: Sides

4 5/64"

Back

2 1/32"

Top

4 5/64"

Bottom

4 5/64"

Pitch of stays to ditto: Sides

10 3/8" x 9 1/8"

Back

9 1/4" x 8 3/4"

Top

10 3/8" x 9 1/8"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

181

Front plate at bottom: Material

steel

Tensile strength

26-30 tons

Thickness

2 1/32"

Lower back plate: Material

steel

Tensile strength

26-30 tons

Thickness

3/4"

Pitch of stays at wide water space

13 7/8"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

212 183

Main stays: Material

steel

Tensile strength

28-32 tons

Diameter

At body of stay, 3" & 2 3/4"

or Over threads

No. of threads per inch

6

Area supported by each stay

39.4 & 35.4 sq ft

Working pressure by Rules

184

Screw stays: Material

steel

Tensile strength

26-30 tons

Diameter

At turned off part, 1 5/8"

or Over threads

No. of threads per inch

9

Area supported by each stay

81 sq ft

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Working pressure by Rules 188 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part. 1 3/4" & 1 7/8"
 No. of threads per inch 9 Area supported by each stay 99.6 & 109.0 Working pressure by Rules 182 & 195
 Tubes: Material Iron External diameter { Plain 3 1/4" Thickness { 9 W.S. No. of threads per inch 9
 Stay 3 1/4" Pitch of tubes 4 1/2" x 4" Working pressure by Rules 180 Manhole compensation: Size of opening in
 end 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 A16 Thickness of shell 1/2" Description of longitudinal joint
 Diameter of rivet holes 1 3/4" Pitch of rivets 6" Percentage of strength of joint 100%
 Internal diameter 20" Working pressure by Rules 180 Thickness of crown 1/2" No. and diameter of
 stays 2 Inner radius of crown 10" Working pressure by Rules 180
 Hold connected to shell yes Size of doubling plate under dome 16" x 12" Diameter of rivet holes and pitch
 of rivets in outer row in dome connection to shell 1 3/4" x 4"
 Type of Superheater none Manufacturers of { Tubes
 Steel castings
 Number of elements 1 Material of tubes Iron Internal diameter and thickness of tubes
 Material of headers Iron Tensile strength A16 Thickness 1/2" Can the superheater be shut off and
 the boiler be worked separately yes Is a safety valve fitted to every part of the superheater which can be shut off from the boiler
 Area of each safety valve 10" Are the safety valves fitted with easing gear yes Working pressure as per
 Rules 180 Pressure to which the safety valves are adjusted 180 Hydraulic test pressure:
 tubes 180 and after assembly in place 180 Are drain cocks or valves fitted
 to free the superheater from water where necessary yes
 Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with yes

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

Dates { During progress of work in shops - - 1928 Nov. 16-19-23 Dec 6 (1929) Mar Are the approved plans of boiler and superheater forwarded herewith
 while building { During erection on board vessel - - 5-13-21 Apr 12-16-24 May 13-23-29 (If not state date of approval.)
 Total No. of visits 22
June 3-12-18-26 July 1-4-9-10

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.

Survey Fee ... £ 14 : : When applied for, 23 JUL 1929
 Travelling Expenses (if any) £ : : When received, 31. 7. 1929

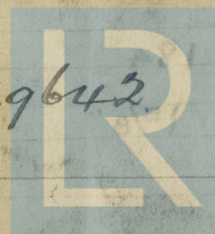
L. Davis
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW

23 JUL 1929

Assigned TRANSMIT TO LONDON

See Ges. Rpt. No. 49642



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