

REPORT ON BOILERS.

No. 45550

Received at London Office

14 APR 1926

Date of writing Report

192

When handed in at Local Office

B. 4

192

Port of

Glasgow

No. in
Reg. Book

Survey held at

Glasgow

Date, First Survey

12.6.25

Last Survey

8 April 1926

(Number of Visits

63)

Gross 5107

Tons Net 3128

on the new steel S/S "DIRECTOR".

Master

Built at

Glasgow

By whom built

D. & W. Henderson & Co. Ltd

Yard No. 722

When built 1926

Engines made at

Glasgow

By whom made

D. & W. Henderson & Co. Ltd

Engine No. 722

When made 1926

Boilers made at

Glasgow

By whom made

D. & W. Henderson & Co. Ltd

Boiler No. 722

When made 1926

Nominal Horse Power

Owners

J. J. Harrison

Port belonging to

Liverpool

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

Manufacturers of Steel

David White & Sons Ltd

(Letter for Record (R))

Total Heating Surface of Boilers

1075 sq ft

Is forced draught fitted

no

Coal or Oil fired

coal

No. and Description of Boilers

one single ended

Working Pressure 120

Tested by hydraulic pressure to

230

Date of test

8.12.25

No. of Certificate

16994

Can each boiler be worked separately

Area of Firegrate in each Boiler

33.5 sq ft

No. and Description of safety valves to each boiler

two direct spring

Area of each set of valves per boiler

per Rule 4.990"

as fitted 5.940"

Pressure to which they are adjusted

125

Are they fitted with easing gear

yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

no

Smallest distance between boilers or uptakes and bunkers or woodwork

well clear

Is oil fuel carried in the double bottom under boilers

no oil fuel

Smallest distance between shell of boiler and tank top plating

no tank

Is the bottom of the boiler insulated

no

Largest internal dia. of boilers

11'-6"

Length

10'-6"

Shell plates: Material

steel

Tensile strength

28-32 tons

Thickness

1 1/16"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end D.R.

long. seams

W.B.S.: T.R.

Diameter of rivet holes in

circ. seams 13/16"

long. seams 13/16"

Pitch of rivets

2.32"

Percentage of strength of circ. end seams

plate 64.9

rivets 63.5

Percentage of strength of circ. intermediate seam

plate 84.9

Percentage of strength of longitudinal joint

rivets 86

combined 91.4

Working pressure of shell by Rules

125

Thickness of butt straps

outer 1 1/2"

inner 3/4"

No. and Description of Furnaces in each Boiler

two, plain

Material

steel

Tensile strength

26-30 tons

Smallest outside diameter

3'-5 1/2"

Length of plain part

top 6'-5 3/4"

bottom 9'-2"

Thickness of plates

crown 9/8"

bottom 15/16" & 5/8"

Description of longitudinal joint

welded

Dimensions of stiffening rings on furnace or c.c. bottom

none

Working pressure of furnace by Rules

128

End plates in steam space: Material

steel

Tensile strength

26-30 tons

Thickness

1 1/16"

Pitch of stays

23 3/4" x 15"

How are stays secured

W.N.

Working pressure by Rules

124

Tube plates: Material

front steel

back steel

Tensile strength

26-30 tons

Thickness

F 13/16"

B 23/32"

Mean pitch of stay tubes in nests

12 1/4"

Pitch across wide water spaces

14 1/2"

Working pressure

front 153

back 122

Girders to combustion chamber tops: Material

steel

Tensile strength

28-32 tons

Depth and thickness of girder

at centre

2 @ 6 1/2" x 9 1/16"

Length as per Rule

2'-3 23/32"

Distance apart

8 3/4"

No. and pitch of stays

in each

2 @ 9"

Working pressure by Rules

123

Combustion chamber plates: Material

steel

Tensile strength

26-30 tons

Thickness: Sides

11/32"

Back

9/16"

Top

17/32"

Bottom

15/16"

Pitch of stays to ditto: Sides

10" x 7 1/2"

Back

9 3/8" x 9"

Top

9" x 8 3/4"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

122

Front plate at bottom: Material

steel

Tensile strength

26-30 tons

Thickness

13/16"

Lower back plate: Material

steel

Tensile strength

26-30 tons

Thickness

5/8"

Pitch of stays at wide water space

13"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

124

Main stays: Material

steel

Tensile strength

28-32 tons

Diameter

At body of stay, 2 1/4" & 2"

No. of threads per inch

6

Area supported by each stay

356.25 & 279 sq"

Working pressure by Rules

120

Screw stays: Material

iron

Tensile strength

Diameter

At turned off part, 1 3/8"

No. of threads per inch

9

Area supported by each stay

84.3 sq"

W233-0149

Working pressure by Rules **120** Are the stays drilled at the outer ends **no** Margin stays: Diameter { At turned off part, **1 1/2"** or Over threads **1 1/2"** ✓
 No. of threads per inch **9** ✓ Area supported by each stay **100.680"** Working pressure by Rules **124**
 Tubes: Material **Iron** ✓ External diameter { Plain **3 1/2"** Stay **3 1/2"** Thickness { **9/16"** No. of threads per inch **9** ✓
 Pitch of tubes **4 3/4" x 4 7/8"** ✓ Working pressure by Rules **165** Manhole compensation: Size of opening in shell plate **19" x 15"** ✓ Section of compensating ring **6 1/2" x 1 1/2"** ✓ No. of rivets and diameter of rivet holes **40 @ 1 3/16"** ✓
 Outer row rivet pitch at ends **5 1/2"** ✓ Depth of flange if manhole flanged **ring flanged 3"** ✓ Steam Dome: Material **none** ✓
 Tensile strength 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
 How connected to shell Inner radius of crown Working pressure by Rules
 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 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 BROWN HENDERSON & CO., LTD.
[Signature] DIRECTOR, Manufacturer.

Dates of Survey { During progress of work in shops - - } 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

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
 It has been satisfactorily fitted in the vessel and its safety valves adjusted under steam

Survey Fee ... £ **4 : 4 :** When applied for, **13/4/1926**
 Travelling Expenses (if any) £ : : When received, **19.4.1926**

[Signature]
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 13 APR 1926**

Assigned *See accompanying machinery report.*