

REPORT ON BOILERS.

No. 49728

23 OCT 1929

Received at London Office

Date of writing Report

192

When handed in at Local Office

21 10

1929

Port of

Glasgow

No. in
Reg. Book.

Survey held at

Glasgow

Date, First Survey

26 4 29

Last Survey

16 10 1929

(Number of Visits

64)

Gross 5122

Tons Net 3162

Master

Built at

Glasgow

By whom built

Hesbomell & Co. Ltd

Yard No.

415

When built

1929

Engines made at

Glasgow

By whom made

David Rowan & Co. Ltd

Engine No.

920

When made

1929

Boilers made at

Glasgow

By whom made

David Rowan & Co. Ltd

Boiler No.

920

When made

1929

Nominal Horse Power

464

Owners

T & J. Harrison Ltd

Port belonging to

Liverpool

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

David & Sons Ltd

(Letter for Record (h) ✓)

Total Heating Surface of Boilers

7706 ft²

Is forced draught fitted

no

Coal or Oil fired

coal ✓

No. and Description of Boilers

two double ended

Working Pressure

200

Tested by hydraulic pressure to

350

Date of test

9-8-29

No. of Certificate

18391

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

105 ft²

No. and Description of safety valves to each boiler

two direct spring

Area of each set of valves per boiler

per Rule

22-40"

as fitted

Pressure to which they are adjusted

205

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

1'-6"

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

15'-2 3/32"

Length

16'-6"

Shell plates: Material

steel

Tensile strength

28-32 tons

Thickness

1 3/64" & 1 3/8"

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 5/16" C 1 7/16" B 1 7/16"

Pitch of rivets

F 3-35" C 4-01" B 3-958"

Percentage of strength of circ. end seams

plate

F 60.8 B 64.2 63.6

rivets

F 48.8 B 72.8 49

Percentage of strength of circ. intermediate seam

plate

63.6 64.2

Percentage of strength of longitudinal joint

rivets

94.1 92.5

combined

89.3 89.2

Working pressure of shell by Rules

200

Thickness of butt straps

outer all 1 3/32"

inner all 1 5/32"

No. and Description of Furnaces in each Boiler

Six Morrison

Material

steel

Tensile strength

26-30 tons

Smallest outside diameter

3'-7 3/16"

Length of plain part

top

bottom

✓

Thickness of plates

crown 1 1/32"

bottom 1 3/32"

Description of longitudinal joint

welded

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

-

Working pressure of furnace by Rules

200

End plates in steam space: Material

steel

Tensile strength

26-30 tons

Thickness

1 3/8"

Pitch of stays

22" x 20"

How are stays secured

DN

Working pressure by Rules

200

Tube plates: Material

front

steel

back

"

Tensile strength

26-30 tons

Thickness

1"

Mean pitch of stay tubes in nests

11 3/4"

Pitch across wide water spaces

14 7/8"

Working pressure

front 230

back 200

Girders to combustion chamber tops: Material

steel

Tensile strength

28-32 tons

Depth and thickness of girder

at centre

2 @ 10 3/4" x 1 1/8"

Length as per Rule

3'-6 1/4"

Distance apart

8 1/8"

No. and pitch of stays

in each

3 @ 10 3/8"

Working pressure by Rules

200

Combustion chamber plates: Material

steel

Tensile strength

26-30 tons

Thickness: Sides

23 3/32"

Back

-

Top

23 3/32"

Bottom

23 3/32"

Pitch of stays to ditto: Sides

10 1/8" x 8 1/8"

Back

-

Top

10 1/8" x 8 1/8"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

200

Front plate at bottom: Material

steel

Tensile strength

26-30 tons

Thickness

1"

Lower back plate: Material

-

Tensile strength

-

Thickness

-

Pitch of stays at wide water space

-

Are stays fitted with nuts or riveted over

-

Working Pressure

3 1/4" & 3"

Main stays: Material

steel

Tensile strength

28-32 tons

Diameter

At body of stay,

3 1/4" & 3"

Over threads

No. of threads per inch

6

Area supported by each stay

460 & 385 sq"

Working pressure by Rules

201

Screw stays: Material

iron

Tensile strength

21 1/2 tons

Diameter

At turned off part,

1 3/4"

Over threads

No. of threads per inch

9

Area supported by each stay

89.8 sq"

If not, state whether, and when, one will be sent?

Is a Report also sent on the Hull of the Ship?

[2m. 228. Copyable Ink.]

REPORT ON BOILERS

Working pressure by Rules 202 Are the stays drilled at the outer ends no Margin stays: Diameter At turned off part, or Over threads
No. of threads per inch - Area supported by each stay - Working pressure by Rules -
Tubes: Material Iron External diameter Plain 3 1/2" Thickness 7 ws. 3/8" No. of threads per inch 9
Pitch of tubes 4 13/16 x 4 5/8" Working pressure by Rules 260 Manhole compensation: Size of opening in shell plate 19 1/2 x 15 1/2" Section of compensating ring 10 1/4 x 1 3/8" No. of rivets and diameter of rivet holes 34 @ 1 1/16"
Outer row rivet pitch at ends 9 1/8" Depth of flange if manhole flanged 3" Steam Dome: Material none
Tensile strength 212 Thickness of shell 2 1/2" Description of longitudinal joint -
Diameter of rivet holes 1/16" Pitch of rivets 1 1/2" Percentage of strength of joint 100%
Internal diameter 20 1/2" Working pressure by Rules 260 Thickness of crown 3/8" No. and diameter of stays 10 @ 1 1/2"
How connected to shell by doubling plate under dome Working pressure by Rules 260 Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 1/16" @ 1 1/2"

Type of Superheater Smoke tube Manufacturers of See Manchester Report: herewith.
Number of elements 1 Material of tubes Iron Internal diameter and thickness of tubes -
Material of headers Iron Tensile strength 212 Thickness 3/8" Can the superheater be shut off and the boiler be worked separately yes
Area of each safety valve 1.770" Are the safety valves fitted with casing gear yes Working pressure as per Rules 207 Hydraulic test pressure: 400 lbs
Pressure to which the safety valves are adjusted 207 and after assembly in place 400 lbs Are drain cocks or valves fitted to free the superheater from water where necessary yes
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.
Archd. W. Grierson

Dates of Survey See Accompanying Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) machy Report
During progress of work in shops -
While building -
During erection on board vessel -
Total No. of visits 64

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

The materials and workmanship are good.
The boilers have been constructed under Special Survey in accordance with the Rules.
Satisfactorily fitted in the vessel and their safety valves adjusted under steam.

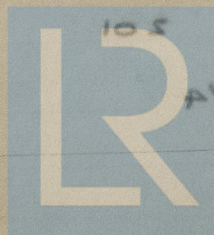
Survey Fee £ 192 When applied for, 192
Travelling Expenses (if any) £ - When received, 192

S. C. Davis

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 22 OCT 1929 JRH

Assigned See Accompanying machy Report



© 2021

Lloyd's Register Foundation