

REPORT ON BOILERS.

No. 57316

W1133-0213

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

eg. Book.

(Number of Visits

75)

Gross

5201

Tons

Net

3076

on the *New steel S/S TREWELLARD*

Master

Built at

Port Glasgow

By whom built

Lithgows Ltd

Yard No. 883

When built 1936

Engines made at

Glasgow

By whom made

Danie Rowan & Co Ltd

Engine No. 989

When made 1936

Boilers made at

Glasgow

By whom made

Danie 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 Co of Scotland Ltd

Stays by Lillies 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 DR lap

Long. seams

DBS 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

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

Percentage of strength of longitudinal joint

plate 85

rivets 91.8

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 Deighton

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 3 3/32"

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"

Working pressure by Rules

256

Screw stays: Material

Iron

Tensile strength

26-30 tons

Diameter

At turned off part, 1 3/4"

Over threads

1 1/8"

No. of threads per inch

9

Area supported by each stay

66 & 78.5 sq"

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 in² ✓ Working pressure by Rules 285
Tubes: Material Iron ✓ External diameter { Plain 3" ✓ Thickness { 8 W.G. ✓ No. of threads per inch 9 ✓
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 888 Thickness of shell - Description of longitudinal joint -
Diameter of rivet holes 888 Pitch of rivets - Percentage of strength of joint { Plate Rivets -
Internal diameter 888 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.
Archd. H. Grierson. Manufacturer.

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 (If not state date of approval.) yes
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 ... £
Travelling Expenses (if any) £
When applied for, 10
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.