

REPORT ON BOILERS.

No. 61406

Received at London Office

AUG 16 1939

Date of writing Report

19

When handed in at Local Office

14. 8.

1939

Port of

Glasgow

No. in Survey held at

Glasgow

Date, First Survey

Last Survey

8-8-

1939

Reg. Book.

on the

new M/V "CAPE CLEAR"

(Number of Visits)

Tons

Gross

5085

Net

2976

Master

Built at

Port Glasgow

By whom built

Lithgows Ltd

Yard No.

906

When built

1939

Engines made at

Glasgow

By whom made

David Rowan & Co Ltd

Engine No.

1020

When made

1939

Boilers made at

Glasgow

By whom made

David Rowan & Co Ltd

Boiler No.

1020

When made

1939

Nominal Horse Power

599

Owners

Lyle Shipping Co

Port belonging to

Glasgow

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Steel Co. of Scotland Ltd (plate)

Lithgows Ltd (stays)

(Letter for Record

S

Total Heating Surface of Boilers

1686 sq ft

Is forced draught fitted

no

Coal or Oil fired

oil

No. and Description of Boilers

one single ended

Working Pressure

120

Tested by hydraulic pressure to

230

Date of test

14-10-38

No. of Certificate

20287

Can each boiler be worked separately

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

Two Improved High Lift (33")

Area of each set of valves per boiler

per Rule

7.8 sq ft

Pressure to which they are adjusted

120

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

no bunkers or woodwork

oil fuel carried in the double bottom under boilers

yes

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'-9"

Length

11'-0"

Shell plates: Material

S

Tensile strength

29-33 tons

Thickness

23/32"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

inter.

long. seams

DBS TR. 4 rivets per pitch

Diameter of rivet holes in

circ. seams

29"

Pitch of rivets

5 3/8"

Percentage of strength of circ. end seams

plate

69.3

rivets

48

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate

83.14

rivets

98.9

combined

92.1

Working pressure of shell by Rules

120

Thickness of butt straps

outer

9/16"

inner

1/16"

No. and Description of Furnaces in each Boiler

Two Deighton

Material

S

Tensile strength

26-30 tons

Smallest outside diameter

3-8 25/32"

Length of plain part

top

bottom

Thickness of plates

crown

25"

bottom

6 1/4"

Description of longitudinal joint

welded

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

Working pressure of furnace by Rules

123

End plates in steam space: Material

S

Tensile strength

26-30 tons

Thickness

1 1/32"

Pitch of stays

22 1/2 x 16

How are stays secured

DN

Working pressure by Rules

122

Tube plates: Material

front

S

back

"

Tensile strength

26-30 tons

Thickness

1 1/16"

Mean pitch of stay tubes in nests

11 21/32"

Pitch across wide water spaces

14"

Working pressure

front

123

back

123

Girders to combustion chamber tops: Material

S

Tensile strength

28-32 tons

Depth and thickness of girder

at centre

2 @ 6 1/4" x 7/8"

Length as per Rule

31 3/4"

Distance apart

9 7/8"

No. and pitch of stays

in each

2 @ 10 1/4"

Working pressure by Rules

122

Combustion chamber plates: Material

S

Tensile strength

26-30 tons

Thickness: Sides

19/32"

Back

9/16"

Top

19/32"

Bottom

19/32"

Pitch of stays to ditto: Sides

10 1/4" x 9 7/8"

Back

8 3/4" x 9 1/2"

Top

10 1/4" x 9 7/8"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

120

Front plate at bottom: Material

S

Tensile strength

26-30 tons

Thickness

13/16"

Lower back plate: Material

S

Tensile strength

26-30 tons

Thickness

7/8"

Pitch of stays at wide water space

13 1/2"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

120

Main stays: Material

S

Tensile strength

28-32 tons

Diameter

At body of stay,

or

Over threads

No. of threads per inch

6

Area supported by each stay

448" & 347"

Working pressure by Rules

120 & 126

Screw stays: Material

S

Tensile strength

26-30 tons

Diameter

At turned off part,

or

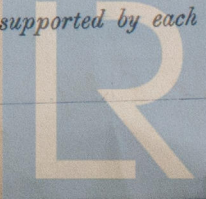
Over threads

No. of threads per inch

9

Area supported by each stay

832" & 102"


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 W1163-0169

Working pressure by Rules 123 & 125 Are the stays drilled at the outer ends no Margin stays: Diameter At turned off part, or Over threads 1 1/2" 1 7/8"
No. of threads per inch 9 Area supported by each stay 101" & 112" Working pressure by Rules 125 & 137
Tubes: Material steel External diameter 3" Thickness 9 w.s. 1/4" 7/16" No. of threads per inch 9
Pitch of tubes 4 1/4" x 4 1/8" Working pressure by Rules 190 Manhole compensation: Size of opening in
shell plate 15" x 19" Section of compensating ring 7" x 2 3/32" No. of rivets and diameter of rivet holes 36 @ 2 9/32"
Outer row rivet pitch at ends 5 9/16" Depth of flange if manhole 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 _____ 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 forgings 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 _____ forgings and 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 ye

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

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

SEE ACCOMPANYING MACHINERY REPORT.

Are the approved plans of boiler and superheater forwarded herewith ye
(If not state date of approval.)
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 workmanship and materials are good.
The boiler has been constructed under Special Survey, satisfactorily fitted in the vessel and the safety valves adjusted under steam.

Survey Fee ... £
Travelling Expenses (if any) £

When applied for, 10
When received, 10

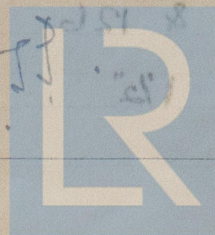
Sh. Davis

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 15 AUG 1939

SEE ACCOMPANYING MACHINERY REPORT.

Assigned.



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Foundation