

REPORT ON BOILERS.

No. 16179

Received at London Office

NOV 30 1937

Date of writing Report

19

When handed in at Local Office

29-11-

19

Port of

Middlesbrough.

No. in
Reg. Book

Survey held at

Stockton

Date, First Survey

23rd July

Last Survey

19th Nov

1937

on the

"LOCHAVON"

(Number of Visits 10)

Gross

9205

Tons

Net

5703

Built at

Glasgow

By whom built

Harland & Wolff Ltd

Yard No.

9999

When built

1938

Engines made at

Glasgow

By whom made

Harland & Wolff Ltd.

Engine No.

9999

When made

Boilers made at

Stockton

By whom made

Stockton C.E. & Riley Boilers Ltd

Boiler No.

6276

When made

1937

Owners

Royal Mail Lines Ltd

Port belonging to

London

THIMBLE. TUBE
VERTICAL DONKEY BOILER.

Made at

Stockton

By whom made

Stockton C.E. & Riley Boilers Ltd

Boiler No.

6276

When made

1937

Where fixed

1938

Manufacturers of Steel

Dorman Long & Co Britannia. Appleby-Frodingham Steel Co Ltd & Steel Co of Scotland

Total Heating Surface of Boiler

831.

Is forced draught fitted

Yes.

Coal or Oil fired

Lignite & Oil

No. and Description of Boilers

1 SB.

Working pressure

100 lbs.

Tested by hydraulic pressure to

200.

Date of test

19th November 1937

No. of Certificate

6922

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

One double Spring High Lift

Area of each set of valves per boiler

per rule 6.02 sq in
as fitted 6.3 " " " "

Pressure to which they are adjusted

100 lbs

Are they fitted with easing gear

Yes

State whether steam from main boilers can enter the donkey boiler

Oil Engines, No.

Smallest distance between boiler or uptake and bunkers

or woodwork well clear

Is oil fuel carried in the double bottom under boiler

No

Smallest distance between base of boiler and tank top plating

well clear.

Is the base of the boiler insulated

No. Vent Bk.

Largest internal dia. of boiler

7'-7"

Height

18'-9"

Shell plates: Material

S.

Tensile strength

29-33

Thickness

7/16

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

end SR
inter. SR

long. seams

DR. B.S.

Dia. of rivet holes in

circ. seams 19/16
long. seams 13/16

Pitch of rivets

2 1/8
3

Percentage of strength of circ. seams

plate 55.4
rivets 54.6

of Longitudinal joint

plate 72.9
rivets 11.7
combined 104

Working pressure of shell by rules

101.4.

Thickness of butt straps

outer 7/16
inner 7/16

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat

Part Sphere.

Material

S

Tensile strength

26-30

Thickness

7/32"

Radius

83.16

Working pressure by rules

122

Description of Furnace: Plain, spherical, or dished crown

plain

Material

S

Tensile strength

26-30

Thickness

1 1/8"

External diameter

top 4'-11 1/2"
bottom 4'-11 1/2"

Length as per rule

8'-5"

Working pressure by rules

126

Pitch of support stays circumferentially

and vertically

Are stays fitted with nuts or riveted over

Diameter of stays over thread

Radius of spherical or dished furnace crown

7'-7"

Working pressure by rule

Thickness of Ring

1"

Diameter as per rule

Flat plate rule. d = 7.875"

Working pressure by rule

1580.

Combustion Chamber: Material

S

Tensile strength

26-30

Thickness of top plate

7/16"

Radius if dished

53.3

Working pressure by rule

150

Thickness of back plate

Diameter if circular

Length as per rule

Pitch of stays

Are stays fitted with nuts or riveted over

Diameter of stays over thread

Working pressure of back plate by rules

Tube Plates: Material

front
back

Tensile strength

Thickness

Mean pitch of stay tubes in nests

If comprising shell, Dia. as per rule

front
back

Pitch in outer vertical rows

Dia. of tube holes FRONT

stay
plain

BACK

stay
plain

Is each alternate tube in outer vertical rows a stay tube

Working pressure by rules

front
back

Girders to combustion chamber tops: Material

Tensile strength

Depth and thickness of girder at centre

Length as per rule

Distance apart

No. and pitch of stays in each

Working pressure by rule

Crown stays: Material ☒ Tensile strength ☒ Diameter ☒ at body of stay or over threads ☒

No. of threads per inch ☒ Area supported by each stay ☒ Working pressure by rules ☒

Screw stays: Material ☒ Tensile strength ☒ Diameter ☒ at turned off part or over threads ☒ No. of threads per inch ☒

Area supported by each stay ☒ Working pressure by rules ☒ Are the stays drilled at the outer ends ☒

Tubes: Material *Thimbles* ☒ External diameter ☒ *3 1/2" tapered to 2 1/4"* Thickness ☒ *9 x 8 w.s.*

No. of threads per inch ☒ Pitch of tubes ☒ Working pressure by rules ☒

Manhole Compensation: Size of opening in 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 *3 1/2"* ☒

Uptake: External diameter *33 1/2"* ☒ Thickness of uptake plate *3/4"* ☒

Cross Tubes: No. ☒ External diameters ☒ Thickness of plates ☒

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with *yes*

For and on behalf of
The foregoing is a correct description,
G. H. Riley Manufacturer.
DIRECTOR.

Dates of Survey: During progress of work in shops - *1937/38 Aug 3. 13. Sep 2. 28 Oct 13. 15. 26* Is the approved plan of boiler forwarded herewith *yes*
(If not state date of approval.)
During erection on board vessel - *Nov 4. 19* Total No. of visits *10*

Is this Boiler a duplicate of a previous case. ☒ If so, state Vessel's name and Report No. ☒

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
*The material & workmanship are good.
The Boiler has been made under special
survey in accordance with the approved plan
& requirements of the rules.
On completion the boiler was tested to 200 lbs.
hydraulic pressure & has been forwarded to
Glasgow.*

*This boiler has been satisfactorily fitted on board. Safety valves
adjusted under steam to 100 lbs per sq. inch and found sound and
tight.
Compression washer. Forward valve 1 3/32" after valve 7/16"
The position of the donkey boiler is on the top engine platform, Forward, and
below funnel. The donkey boiler is used for heating and driving
steam auxiliary compressor.*

Survey Fee ... £ *5-12-0* : *4* : *4* : } When applied for, *29. 11. 1937*
Travelling Expenses (if any) £ : : } When received, *6. 4. 1938*
(per L. & L.)

G. E. Murdoch
R. Moffatt
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW 9 - AUG 1938*
Assigned *SEE ACCOMPANYING MACHINERY REPORT.*

