

## REPORT ON BOILERS.

No. 31271

31 AUG 1933

Received at London Office

Date of writing Report

192

When handed in at Local Office

192

Port of

SUNDERLAND.

No. in Survey held at  
Reg. Book.

Sunderland.

Date, First Survey

Last Survey

Aug 28 1933

(Number of Visits)

Gross

991

Tons

Net

532.

on the

S/S "CORHAVEN"

Master

Built at

Sunderland

By whom built

S.P. Austin &amp; Sons

Yard No.

328

When built

1933

Engines made at

Sunderland

By whom made

H. E. Mar. Eng. Co. Ltd.

Engine No.

2499

When made

1933

Boilers made at

Sunderland

By whom made

H. E. Mar. Eng. Co. Ltd.

Boiler No.

2499

When made

1933.

Nominal Horse Power

118

Owners

Wm. Cory &amp; Son Ltd.

Port belonging to

London.

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

The Steel Company of Scotland

(Letter for Record

S.

Total Heating Surface of Boilers

2231 sq ft

Is forced draught fitted

No.

Coal or Oil fired

Coal.

No. and Description of Boilers

One single ended

Working Pressure

200.

Tested by hydraulic pressure to

350

Date of test

13.4.33

No. of Certificate

4139.

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

53 sq ft

No. and Description of safety valves to each boiler

Two direct spring.

Area of each set of valves per boiler

per Rule  
as fitted12.94 sq ft  
14.12 sq ft

Pressure to which they are adjusted

200.

Are they fitted with easing gear

Yes.

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

Yes

Smallest distance between boilers or uptakes and bunkers

4'-0"

Is oil fuel carried in the double bottom under boilers

No.

Smallest distance between shell of boiler and tank top plating

open floors

Is the bottom of the boiler insulated

Yes.

Largest internal dia. of boilers

15'-0 3/8"

Length

10'-6"

Shell plates: Material

Steel

Tensile strength

29-33

Thickness

15/16"

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

end

inter.

long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams  
long. seams

1 3/8"

Pitch of rivets

4"

9 1/2"

Percentage of strength of circ. end seams

plate  
rivets65.6%  
44.8%

Percentage of strength of circ. intermediate seam

plate  
rivets

-

Percentage of strength of longitudinal joint

plate  
rivets  
combined85.53%  
88.54%  
88.46%

Working pressure of shell by Rules

200

Thickness of butt straps

outer  
inner1"  
1 1/8"

No. and Description of Furnaces in each Boiler

3 corrugated (beehive section)

Material

Steel

Tensile strength

26-30

Smallest outside diameter

3'-6 1/16"

Length of plain part

top  
bottom

-

Thickness of plates

crown  
bottom

19/32"

Description of longitudinal joint

welded.

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

Yes

Working pressure of furnace by Rules

203.5

End plates in steam space: Material

Steel

Tensile strength

26-30

Thickness

1 1/32"

Pitch of stays

21" x 20"

How are stays secured

Double nuts.

Working pressure by Rules

201.5.

Tube plates: Material

front  
back

Steel

Tensile strength

26-30

Thickness

15/16"

13/16"

Mean pitch of stay tubes in nests

10'-5"

Pitch across wide water spaces

14 1/2" x 9"

Working pressure

front  
back211  
214

Girders to combustion chamber tops: Material

Steel

Tensile strength

28-32

Depth and thickness of girder

at centre

8 1/4" x 13 1/4"

Length as per Rule

31.4"

Distance apart

10"

No. and pitch of stays

in each

2 @ 9 3/4"

Working pressure by Rules

204

Combustion chamber plates: Material

Steel

Tensile strength

26-30

Thickness: Sides

25/32"

Back

25/32"

Top

25/32"

Bottom

25/32"

Pitch of stays to ditto: Sides

10 3/4" x 9 3/4"

Back

10 3/8" x 9 1/2"

Top

10" x 9 3/4"

Are stays fitted with nuts or riveted over

nuts.

Working pressure by Rules

204, 216, 220

Front plate at bottom: Material

Steel

Tensile strength

26-30

Thickness

15/16"

Lower back plate: Material

Steel

Tensile strength

26-30

Thickness

15/16"

Pitch of stays at wide water space

14 1/2" x 10 3/8"

Are stays fitted with nuts or riveted over

nuts.

Working Pressure

222 204.

Main stays: Material

Steel

Tensile strength

28-32

Diameter

At body of stay,  
or  
Over threads3 1/8"  
3 1/2"

No. of threads per inch

6.

Area supported by each stay

420 sq in

Working pressure by Rules

203.5

Screw stays: Material

Steel

Tensile strength

26-30

Diameter

At turned off part,  
or  
Over threads

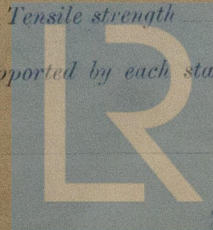
1 1/8"

No. of threads per inch

9

Area supported by each stay

102.5 sq in

Lloyd's Register  
Foundation  
W 374-6180



Working pressure by Rules 205 Are the stays drilled at the outer ends No. Margin stays: Diameter 2" At turned off part, or Over threads  
No. of threads per inch 9 Area supported by each stay 122.5 Working pressure by Rules 202.  
Tubes: Material Steel External diameter Plain 3 1/4" Thickness 8 L.G. 1/4" 5/16" 3/8" No. of threads per inch 9  
Pitch of tubes 4 9/16" x 4 1/2" Working pressure by Rules 230 200 203 222 Manhole compensation: Size of opening in  
END steel plate 16" x 12" Section of compensating ring Flanged. No. of rivets and diameter of rivet holes  
Outer row rivet pitch at ends Depth of flange if manhole flanged 4 7/8" 3 3/8" Steam Dome: Material  
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 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

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LTD.  
The foregoing is a correct description,  
Archd. P. Barry. Manufacturer.

Dates of Survey while building { During progress of work in shops - - - Please see Mech. Report. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes.  
{ During erection on board vessel - - -  
Total No. of visits

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

This boiler has been constructed under Special Survey in accordance with the approved Plan & the Rules of the Society. The materials & workmanship are good. On completion the boiler has been satisfactorily tested by hydraulic pressure in accordance with the Rules & found tight & sound, securely fixed on board the vessel, & examined under steam, safety valves adjusted to working pressure & accumulation test carried out satisfactorily. For recommendation please see Machinery Report.

Survey Fee ... Charged on Mech. Rpt. When applied for, 192  
Travelling Expenses (if any) £ ... When received, 192

J. St. Fraser.  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 5 SEP 1933  
Assigned See F.E. Rpt.