

REPORT ON BOILERS.

No. 31271

RETAIN

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

on the

S/S "CORHAVEN"

(Number of Visits

✓)

Gross

991

Tons

Net 532.

Master

Built at

Sunderland

By whom built

S.P. Austin & 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 & 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

✓

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 12.94 sq in ✓
as fitted 14.12 sq in

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

✓

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 1 3/8" ✓
long. seams 1 3/8" ✓

Pitch of rivets

4" ✓
9 1/2" ✓

Percentage of strength of circ. end seams

plate 65.6%
rivets 44.8%

Percentage of strength of circ. intermediate seam

plate -
rivets -

Percentage of strength of longitudinal joint

plate 85.53%
rivets 88.54%
combined 88.46%

Working pressure of shell by Rules

200

Thickness of butt straps

outer 1" ✓
inner 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

crowns 19/32" ✓
bottom 19/32" ✓

Description of longitudinal joint

welded. ✓

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

✓

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

Steel ✓

Tensile strength

26-30 ✓

Thickness

15/16" ✓
13/16" ✓

Working pressure

front 211
back 214

Mean pitch of stay tubes in nests

10.5" ✓

Pitch across wide water spaces

14 1/2" x 9" ✓

Working pressure

front 211
back 214

Girders to combustion chamber tops:

Material

Steel ✓

Tensile strength

28-32 ✓

Depth and thickness of girder

at centre

8 1/4" x 1 3/4" ✓

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, 3 1/8" ✓
or
Over threads 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, 1 1/8" ✓
or
Over threads 1 1/8" ✓

No. of threads per inch

9 ✓

Area supported by each stay

182.5 sq in



Lloyd's Register
Foundation
W 374-0180

Working pressure by Rules **205** Are the stays drilled at the outer ends **No.** Margin stays: Diameter ^{At turned off part,} **2"**
 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 3/4"** Thickness **8 L.C.** 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
 ENP **16" x 12"** Section of compensating ring **Flanged** No. of rivets and diameter of rivet holes
 Outer row rivet pitch at ends **4 7/8** Depth of flange if manhole flanged **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}
 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. LD.
 The foregoing is a correct description,
Archd. P. Bayly Manufacturer.
 Dates of Survey ^{During progress of work in shops - - -} **Please see Mech. Report.** Are the approved plans of boiler and superheater forwarded herewith **Yes.**
 while building ^{During erection on board vessel - - -} (If not state date of approval.)
 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) £ **Charged on Mech. Rpt.** 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.**

