

REPORT ON BOILERS.

No. 29019

- 5 MAR 1925

Received at London Office

Date of writing Report

192

When handed in at Local Office

5 MAR 1925

Port of

Sunderland

No. in Survey held at
Reg. Book.

Sunderland

Date, First Survey

26th May '24

Last Survey

27th Feb 1925

on the new steel S. S. "SILVERMOOR"

(Number of Visits 32)

Tons

Gross 1906.36

Net 1088.79

Master

Built at Sunderland

By whom built

J. Brown & Sons Ltd

Yard No. 144

When built 1925

Engines made at

Sunderland

By whom made

N. E. Marine Eng Co Ltd

Engine No. 2568

When made 1925

Boilers made at

Sunderland

By whom made

N. E. Marine Eng Co Ltd

Boiler No. 2568

When made 1925

Nominal Horse Power

216

Owners

Moor Line Ltd.

Port belonging to

Newcastle.

W. Runciman & Co Ltd Mgrs.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

The Steel Company of Scotland

(Letter for Record (S))

Total Heating Surface of Boilers

3594

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

Two Cylindrical - Single Ended Marine Type

Working Pressure

180 lbs

Tested by hydraulic pressure to

320 lbs

Date of test

21-8-24

No. of Certificate

3894

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

46

No. and Description of safety valves to each boiler

Two Direct Spring Loaded

Area of each set of valves per boiler

per Rule 11.52

as fitted 11.86

Pressure to which they are adjusted

185 lbs

Are they fitted with easing gear

Yes

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

not so fitted

Smallest distance between boilers or uptakes and bunkers or woodwork

18"

Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating

23"

Is the bottom of the boiler insulated

No

Largest internal dia. of boilers

13'-6 3/4"

Length

11'-0"

Shell plates: Material

Steel

Tensile strength

28 to 32 tons

Thickness

1 1/8"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end D.R. L.A.P. inter.

long. seams

T.R. D.B.S

Diameter of rivet holes in

circ. seams 1 5/32"

long. seams 1 5/32"

Pitch of rivets

3 1/2" 8 3/4"

Percentage of strength of circ. end seams

plate 61.4 rivets 43.9

Percentage of strength of circ. intermediate seam

plate 86.1 rivets 85.5

Percentage of strength of longitudinal joint

plate 86.1 rivets 85.5 combined 89.4

Working pressure of shell by Rules

181 lbs

Thickness of butt straps

outer 4/8" inner 1"

No. and Description of Furnaces in each Boiler

3. Deighton

Material

Steel

Tensile strength

26 to 30 tons

Smallest outside diameter

35 5/8"

Length of plain part

top bottom

Thickness of plates

crown 2 1/4" bottom 6/4"

Description of longitudinal joint

Welded

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

Working pressure of furnace by Rules

184 lbs

End plates in steam space: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1 1/4"

Pitch of stays

24" x 18"

How are stays secured

Double Nuts & Washers

Working pressure by Rules

182 lbs

Tube plates: Material

front back Steel

Tensile strength

26 to 30 tons

Thickness

7/8" 3/4"

Mean pitch of stay tubes in nests

9 1/2" x 9"

Pitch across wide water spaces

14 1/2"

Working pressure

front 184 lbs back 193 lbs

Girders to combustion chamber tops: Material

Steel

Tensile strength

28 to 32 tons

Depth and thickness of girder

at centre 2 @ 8 x 13/16" Thick

Length as per Rule

32 1/2"

Distance apart

9"

No. and pitch of stays

in each 2 @ 10 1/8"

Working pressure by Rules

189 lbs

Tensile strength

26 to 30 tons

Thickness: Sides

25/32"

Back

25/32"

Top

25/32"

Bottom

25/32"

Pitch of stays to ditto: Sides

1 1/2" x 10 1/8"

Back

1 1/2" x 10 1/2"

Top

9" x 10 1/8"

Are stays fitted with nuts or riveted over

Nuts in C.C. & back plates

Working pressure by Rules

182 lbs

Front plate at bottom: Material

Steel

Tensile strength

26 to 30 tons

Thickness

7/8"

Lower back plate: Material

Steel

Tensile strength

26 to 30 tons

Thickness

25/32"

Pitch of stays at wide water space

14 1/2" x 10 1/2"

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

210 lbs

Main stays: Material

Steel

Tensile strength

28 to 32 tons

Area supported by each stay

432 sq

Diameter

At body of stay, 3 1/8" Over threads

No. of threads per inch

6

Screw stays: Material

Steel

Tensile strength

26 to 30 tons

Working pressure by Rules

194

No. of threads per inch

9

Area supported by each stay

118

Diameter

At turned off part, 1 7/8" Over threads

No. of threads per inch

9

Area supported by each stay

118

Shipping.

At body of stay, 3 1/8" Over threads

No. of threads per inch

6

Screw stays: Material

Steel

Tensile strength

26 to 30 tons

Diameter

At turned off part, 1 7/8" Over threads

No. of threads per inch

9

Area supported by each stay

118

Shipping.

At turned off part, 1 7/8" Over threads

No. of threads per inch

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Area supported by each stay

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Area supported by each stay

118

Shipping.

At turned off part, 1 7/8" Over threads

No. of threads per inch

9

REPORT ON BOILERS

Working pressure by Rules 180 lb. Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, 2" or Over threads 2" ✓
No. of threads per inch 9 ✓ Area supported by each stay 135 sq. Working pressure by Rules 183 lb. ✓
Tubes: Material Wrought Iron External diameter { Plain 3 1/4" ✓ Thickness { 8 W.G. ✓ No. of threads per inch 9 ✓
Stay 3 1/4" ✓ Pitch of tubes 4 7/16" x 4 1/2" ✓ Working pressure by Rules 230 lb. ✓ 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 3 1/4" ✓ 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
Number of elements Material of tubes Manufacturers of Tubes
Material of headers Tensile strength Steel castings
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 Can the superheater be shut off and
Rules Pressure to which the safety valves are adjusted Working pressure as per
tubes, castings and after assembly in place Hydraulic test pressure:
to free the superheater from water where necessary Are drain cocks or valves fitted
Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with Yes ✓

The foregoing is a correct description,
THE NORTH EASTERN MARINE ENGINEERING CO. LTD.
C. F. Adams Manufacturer.

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
The materials and workmanship are good
The boiler have been constructed under special survey
and satisfactorily fixed in the vessel.

Survey Fee ... £ See machinery
Travelling Expenses (if any) £ Report
When applied for, 192
When received, 192

George Anderson
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 10 MAR 1925

Assigned