

REPORT ON BOILERS.

No. 84177.

Received at London Office 13 MAY 1929

Date of writing Report

192

When handed in at Local Office

192

Port of

NEWCASTLE-ON-TYNE

No. in Survey held at
Reg. Book.

Wallsend-on-Tyne.

Date, First Survey

Last Survey

192

on the

Kew Steel S.S. "Kingswood"

(Number of Visits

Tons

Gross

5055.

Net

3076.

Master

Built at

Willington Quay.

By whom built

Northumberland S.B. Co. Ltd

Yard No.

When built

1929.

Engines made at

Wallsend

By whom made

North Eastern Harb. & Coy. Ltd.

Engine No.

When made

1929.

Boilers made at

Wallsend.

By whom made

North Eastern Harb. & Coy. Ltd.

Boiler No.

When made

1929.

Nominal Horse Power

469

Owners

Joseph Constantine S.S. Line Ltd

Port belonging to

Middlesbrough

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

D. Christie & Sons Ltd & Steel Coy of Scotland Ltd.

(Letter for Record

S.

Total Heating Surface of Boilers

5916

Is forced draught fitted

yes

Coal or Oil fired

coal

No. and Description of Boilers

Two single ended.

Working Pressure

200 lbs

Tested by hydraulic pressure to

350

Date of test

11-29

No. of Certificate

341

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

62.5

No. and Description of safety valves to each boiler

Two spring loaded. High Lift.

Area of each set of valves per boiler

per Rule

14.8 sq ft x 2 = 29.6 sq ft

Pressure to which they are adjusted

205 lbs

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 on uptakes and bunkers on woodwork

1'-5"

Is oil fuel carried in the double bottom under boilers

no

Smallest distance between shell of boiler and tank top plating

2'-3"

Is the bottom of the boiler insulated

yes

Largest internal dia. of boilers

16'-3 1/2"

Length

11'-6"

Shell plates: Material

Steel

Tensile strength

29 to 33 tons

Thickness

1 1/16"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

D.R.

Long. seams

T.R.D.B. S.

Diameter of rivet holes in

circ. seams

1 1/2"

Pitch of rivets

9 3/4"

Percentage of strength of circ. end seams

plate

rivets

62.5

Percentage of strength of circ. intermediate seam

plate

rivets

85.3

Percentage of strength of longitudinal joint

plate

rivets

85.3

Working pressure of shell by Rules

202.5 lbs.

Thickness of butt straps

outer

inner

1 1/2"

No. and Description of Furnaces in each Boiler

Three corrugated (Deighton)

Material

Steel

Tensile strength

26 to 30 tons.

Smallest outside diameter

3-11 1/4"

Length of plain part

top

bottom

yes

Thickness of plates

crown

bottom

2 1/2"

Description of longitudinal joint

weld

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

none

Working pressure of furnace by Rules

203 lbs.

End plates in steam space: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1 1/2"

Pitch of stays

23 x 23

How are stays secured

Double nuts

Working pressure by Rules

200.4 lbs.

Tube plates: Material

front

back

Steel

Tensile strength

26 to 30 tons

Thickness

3/4"

Mean pitch of stay tubes in nests

9 13/16"

Pitch across wide water spaces

14 1/4" x 8 1/2"

Working pressure

front

206

back

208

Girders to combustion chamber tops: Material

Steel

Tensile strength

29 to 33 tons

Depth and thickness of girder

at centre

2 @ 9" x 7 1/2"

Length as per Rule

2'-9"

Distance apart

10 3/4"

No. and pitch of stays

in each

2 @ 9 1/4"

Working pressure by Rules

210 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26 to 30 tons

Thickness: Sides

25/32"

Back

25/32"

Top

25/32"

Bottom

1"

Pitch of stays to ditto: Sides

10 3/4" x 9 1/4"

Back

11 3/8" x 9 1/4"

Top

10 3/4" x 9 1/4"

Are stays fitted with nuts or riveted over

nuts.

Working pressure by Rules

200 lbs

Front plate at bottom: Material

Steel

Tensile strength

26 to 30 tons

Thickness

3/32"

Lower back plate: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1/8"

Pitch of stays at wide water space

14 1/4" x 9 1/4"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

214 lbs.

Main stays: Material

Steel

Tensile strength

28 to 32 tons

Diameter

At body of stay,

or

Over threads

3 3/8"

No. of threads per inch

6

Area supported by each stay

529"

Working pressure by Rules

204 lbs.

Screw stays: Material

Steel

Tensile strength

26 to 30 tons

Diameter

At turned off part,

or

Over threads

1 1/8"

No. of threads per inch

9

Area supported by each stay

105.3"

L

W249-0275

Working pressure by Rules 203 lbs 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 118.8 lbs. Working pressure by Rules 208.5 lbs
Tubes: Material 80 Steel External diameter { Plain 3" Thickness { 9 L.S.G. No. of threads per inch 9
Pitch of tubes 4" x 4" Working pressure by Rules 204 lbs. Manhole compensation: Size of opening in none.
end 16" x 12" Section of compensating ring flanged No. of rivets and diameter of rivet holes 4 1/2"
shell plate 16" x 12" Outer row rivet pitch at ends ✓ Depth of flange if manhole flanged 4 1/2" Steam Dome: Material none.
Tensile strength 204 Thickness of shell 3" Description of longitudinal joint Plate
Diameter of rivet holes 4 1/2" Pitch of rivets 4 1/2" Percentage of strength of joint { Rivets 100%
Internal diameter 20 1/2" Working pressure by Rules 204 lbs. Thickness of crown 3" No. and diameter of
stays 20 Inner radius of crown 20 1/2" Working pressure by Rules 204 lbs. Diameter of rivet holes and pitch
How connected to shell Size of doubling plate under dome
of rivets in outer row in dome connection to shell Size of doubling plate under dome

Type of Superheater Rod Eastern Mar. (Schmit type) Manufacturers of The Weldless Steel Tube Coy.
Number of elements 126 Material of tubes Solid drawn steel Internal diameter and thickness of tubes 1 1/4" x 2 5/8"
Material of headers Forged steel Tensile strength 26-30 tons Thickness 3/8" Can the superheater be shut off and
the boiler be worked separately no Is a safety valve fitted to every part of the superheater which can be shut off from the boiler yes
Area of each safety valve 3.1416" Are the safety valves fitted with easing gear yes Working pressure as per
Rules 200 lbs Pressure to which the safety valves are adjusted 205 lbs. Hydraulic test pressure: Tested
tubes 1500 lbs and after assembly in place 500 lbs Are drain cocks or valves fitted
to free the superheater from water where necessary yes
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with yes.

For THE NORTH EASTERN MARINE ENGINEERING CO. LD.
The foregoing is a correct description,
G. J. Stephenson
Commercial Manager,
Are the approved plans of boiler and superheater forwarded herewith
(If not state date of approval.)
Total No. of visits 2

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
These Boilers have been built under Special Survey. Materials & Workmanship good. Hydraulic tests satisfactory. They have been securely fired in the vessel examined under steam & safety valves adjusted.

Survey Fee £ 100 When applied for, 192
Travelling Expenses (if any) £ 100 When received, 192
Committee's Minute FRI. 17 MAY 1929
Assigned See attached