

Rpt. 5a.

REPORT ON BOILERS.

No. 86794

11 FEB 1931

Received at London Office

Date of writing Report

19

When handed in at Local Office

10/21 1931

Port of

Newcastle-on-Tyne.

No. in Survey held at
Reg. Book.

Wallsend.

Date, First Survey

4 June 1930

Last Survey

2 Feb 1931.

on the

New Steel M.T. "Imperial Transport"

(Number of Visits

Gross 8022
Net 4830

Master

Built at

Glasgow

By whom built

Blythwood & Co. Ltd.

Yard No.

31

When built

1931

Engines made at

Wallsend.

By whom made

North Eastern Marine & Coy. Ltd.

Engine No.

2465

When made

1931

Boilers made at

Wallsend.

By whom made

North Eastern Marine & Coy. Ltd.

Boiler No.

2465

When made

1931

Nominal Horse Power

633.

Owners

Port belonging to

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

Manufacturers of Steel

The Steel Company of Scotland Ltd.

(Letter for Record

S.

Total Heating Surface of Boilers

3064

Is forced draught fitted

yes

Coal or Oil fired

Waste heat oil fired.

No. and Description of Boilers

Two single ended.

Working Pressure

180 lbs

Tested by hydraulic pressure to

320 lbs.

Date of test

21-10-30

No. of Certificate

514

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

✓

No. and Description of safety valves to each boiler

Two spring loaded.

Area of each set of valves per boiler

{ per Rule 11.8

{ as fitted 14

Pressure to which they are adjusted

180 lbs

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 or woodwork

well clear

Is oil fuel carried in the double bottom under boilers

✓

Smallest distance between shell of boiler and tank top plating

on upper flat

Is the bottom of the boiler insulated

yes.

Largest internal dia. of boilers

10'-4 5/16"

Length

11'-6"

Shell plates: Material

Steel

Tensile strength

29 to 33 tons

Thickness

2 3/8"

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 15/16"

Pitch of rivets

{ 3 1/4" 6 1/16"

Percentage of strength of circ. end seams

{ plate 69

{ rivets 45.5

Percentage of strength of circ. intermediate seam

{ plate 86

{ rivets 91

Percentage of strength of longitudinal joint

{ plate 86

{ rivets 91

Working pressure of shell by Rules

182.3 lbs.

Thickness of butt straps

{ outer 1 1/16"

{ inner 1 3/16"

No. and Description of Furnaces in each Boiler

One corrugated (Deighton)

Material

Steel

Tensile strength

26 to 30 tons

Smallest outside diameter

3'-8 3/8"

Length of plain part

{ top ✓

{ bottom ✓

Thickness of plates

{ crown 9/16"

{ bottom 9/16"

Description of longitudinal joint

weld.

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

none

Working pressure of furnace by Rules

184 lbs

End plates in steam space: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1 5/16"

Pitch of stays

1-1 x 1-1"

How are stays secured

double nuts

Working pressure by Rules

180.5 lbs.

Tube plates: Material

{ front Steel

{ back Steel

Tensile strength

26 to 30 tons

Thickness

1 5/16"

Mean pitch of stay tubes in nests

1 13/16"

Pitch across wide water spaces

13 x 6 1/4"

Working pressure

{ w.w.s. 216 lbs

{ front 389 lbs

Girders to combustion chamber tops: Material

Steel

Tensile strength

29 to 33 tons

Depth and thickness of girder

at centre

2 @ 4 1/2 x 1 1/16"

Length as per Rule

2'-3"

Distance apart

10"

No. and pitch of stays

in each

2 @ 8"

Working pressure by Rules

185 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26 to 30 tons

Thickness: Sides

2 3/32"

Back

2 3/32"

Top

2 3/32"

Bottom

2 3/32"

Pitch of stays to ditto: Sides

8 1/2 x 1 1/4"

Back

10 x 10"

Top

8 x 10"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

181.3 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1 5/16"

Lower back plate: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1 5/16"

Pitch of stays at wide water space

13" x 10"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

268 lbs.

Main stays: Material

Steel

Tensile strength

28 to 32 tons

Diameter

{ At body of stay, 2 3/4"

{ Over threads 2 3/4"

No. of threads per inch

6

Area supported by each stay

24 1/4"

Working pressure by Rules

216 lbs.

Screw stays: Material

Steel

Tensile strength

26 to 30 tons

Diameter

{ At turned off part, 1 3/4"

{ Over threads 1 3/4"

No. of threads per inch

9

Area supported by each stay

100"

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Working pressure by Rules 181.5 lbs. Are the stays drilled at the outer ends ☒ no Margin stays: Diameter { At turned off part, 1 1/8" or Over threads 1 1/8" Working pressure by Rules 185 lbs.

No. of threads per inch 9 Area supported by each stay 115 sq. in. Working pressure by Rules 185 lbs.

Tubes: Material S.D. Steel External diameter { Plain 2" Thickness { 10 L 5 G 3/8 + 5/16 No. of threads per inch 9

Pitch of tubes 3 1/4 x 3 1/8 Working pressure by Rules W.W.S. 200 lbs. Manhole compensation: Size of opening in shell plate 1-8" x 1-4" Section of compensating ring 10 1/8 x 1" No. of rivets and diameter of rivet holes 32 @ 1 3/16"

Outer row rivet pitch at ends 8 3/4" Depth of flange if manhole flanged 3 1/8" 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

How connected to shell Inner radius of crown Working pressure by Rules

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 ☒ yes.

The foregoing is a correct description,
THE NORTH EASTERN MARINE ENGINEERING CO., LTD.
W. Campbell, Glasgow Manufacturer.

Dates of Survey { During progress of work in shops - - }
while building { During erection on board vessel - - }

See Truly Report

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) ☒ yes.

Total No. of visits

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.)

These Boilers have been built under Special Survey. Materials & workmanship good. Hydraulic tests satisfactory. They have been shipped to Glasgow for installation in the vessel.

Survey Fee ... £ 20 : 8 : 0 When applied for, 19

Travelling Expenses (if any) £ : ✓ : When received, 19

W. Campbell

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 15 SEP 1931

Assigned See Glasgow Report No. 51756 W.H.



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