

## REPORT ON BOILERS.

No. 81713.

Received at London Office 25 AUG 1927

Writing Report

192

When handed in at Local Office

11. 8.

1927

Port of

Newcastle-on-Tyne

Survey held at

Wallsend

Date, First Survey

5 Nov. 1925

Last Survey

4 August 1927.

(Number of Visits)

Gross

7468

Tons

Net

4328

on the

New Steel H.S. "Patella"

Built at

Jarrow

By whom built

Palmer's Shipyard

Yard No.

956

When built

1924

made at

Newcastle-on-Tyne

By whom made

North Eastern Marine Eng. Co. Ltd.

Engine No.

2616

When made

1924

made at

Newcastle-on-Tyne

By whom made

North Eastern Marine Eng. Co. Ltd.

Boiler No.

2616

When made

1924

Horse Power

1204

Owners

Anglo-Saxon Petroleum Coy Ltd.

Port belonging to

London

TITUBULAR BOILERS ~~MAIN, AUXILIARY, OR~~ DONKEY.

Manufacturers of Steel

David Colville &amp; Sons, Ltd.

(Letter for Record 8.)

Heating Surface of Boilers

2372 sq ft

Is forced draught fitted

Yes

Coal or Oil fired

Oil

Description of Boilers

Two single-ended cylindrical

Working Pressure

180 lbs ✓

by hydraulic pressure to

320 lbs

Date of test

22.7.26

No. of Certificate

118

Can each boiler be worked separately

Yes ✓

Firegrate in each Boiler

30 sq ft

No. and Description of safety valves to each boiler

Two Spring-loaded

of each set of valves per boiler

(per Rule

9.020"

Pressure to which they are adjusted

185 lbs

Are they fitted with easing gear

Yes ✓

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

✓

st distance between boilers or uptakes and bunkers or woodwork

On main deck pieces

Is oil fuel carried in the double bottom under boilers

Yes ✓

st distance between shell of boiler and tank top plating

2'-10"

Is the bottom of the boiler insulated

Yes ✓

internal dia. of boilers

10'-6"

Length

10'-8"

Shell plates: Material

Steel ✓

Tensile strength

28-32 Tons

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

Double ✓

Diameter of rivet holes in

circ. seams

1 1/16"

Pitch of rivets

3 1/2"

Percentage of strength of circ. end seams

plate 69.6  
rivets 47.5

Percentage of strength of circ. intermediate seam

plate 67 1/8"

Percentage of strength of longitudinal joint

plate 85.9  
rivets 94.3  
combined 90.6

Working pressure of shell by Rules

180 lbs

No. and Description of Furnaces in each Boiler

Two Deighton

Tensile strength

26-30 Tons

Smallest outside diameter

33 5/8" ✓

Thickness of plates

7/16"

Description of longitudinal joint

Weld ✓

Working pressure of furnace by Rules

185 lbs

Pitch of stays

17 1/2" x 13 1/2"

Working pressure by Rules

188 lbs

Tensile strength

26-30 Tons

Thickness

1"

Pitch of stay tubes in nests

7 3/8"

Pitch across wide water spaces

14" ✓

Working pressure

front 195 lbs  
back 305 lbs

Tensile strength

28-32 Tons

Depth and thickness of girder

No. and pitch of stays

Length as per Rule

27"

Distance apart

8 3/4" ✓

Working pressure by Rules

193 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

3/4"

Back

3/4"

Top

3/4"

Bottom

15/16"

Are stays fitted with nuts or riveted over

riveted on

Front plate at bottom: Material

Steel

Tensile strength

26-30 Tons

Lower back plate: Material

Steel

Tensile strength

26-30 Tons

Thickness

1"

Are stays fitted with nuts or riveted over

Nut ✓

Main stays: Material

Steel

Tensile strength

28-32 Tons

No. of threads per inch

2 1/2"

Area supported by each stay

236.25 sq in

Screw stays: Material

Steel

Tensile strength

26-30 Tons

No. of threads per inch

1 1/2"

Area supported by each stay

68.9 sq in

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Foundation  
W 205-0108



Working pressure by Rules *182 lbs* Are the stays drilled at the outer ends *No* Margin stays: Diameter { At turned off part *1 3/4"* or Over threads *1 3/4"* ✓  
No. of threads per inch *nine* ✓ Area supported by each stay *90 sq"* Working pressure by Rules *202 lbs*  
Tubes: Material *Iron* External diameter { Plain *2 3/4"* Stay *2 3/4"* Thickness { No. 8 *1/16"* - *1/4"* ✓ No. of threads per inch *nine*  
Pitch of tubes *4" x 3 3/8"* Working pressure by Rules *plain 275 lbs stay 199 lbs* Manhole compensation: Size of opening in shell plate *18" x 14"* ✓ Section of compensating ring *32 1/2" x 28 1/2" x 1"* No. of rivets and diameter of rivet holes *32 - 1 3/16"*  
Outer row rivet pitch at ends *9"* ✓ Depth of flange if manhole flanged *3 1/2"* ✓ 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 23 inclusive for boilers been complied with *yes*

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

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

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval) */*  
Total No. of visits */*

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

*These Boilers have been built under Special Survey. Materials and Workmanship good. Hydraulic Tests satisfactory. They were examined under steam and safety valves adjusted.*

Survey Fee ... £ *see Mch report* When applied for, 192  
Travelling Expenses (if any) £ *report* When received, 192

*William Bates*

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *YES. 30 AUG 1927*

Assigned *see Minute on hwc R/L 81713 attached*



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