

## REPORT ON BOILERS.

No. 95797

Received at London Office

JAN 7 1938

Writing Report 24-12-1937 When handed in at Local Office 28/12/1937 Port of NEWCASTLE-ON-TYNE

Survey held at

Wallsend

Date, First Survey

14 May

Last Survey

21<sup>st</sup> Sept 1937

Book.

(Number of Visits

13)

Tons

Gross 5038

Net 3107

on the

Steamer "KINGSWOOD"

Built at Newcastle

By whom built North Eastern Marine Eng Co. Ltd. Yard No.

When built 1929-5

as made at

Wallsend

By whom made

North Eastern Marine Eng Co. Ltd.

Engine No. 2690

When made 1929

as made at

Wallsend

By whom made

North Eastern Marine Eng Co. Ltd.

Boiler No. 2901

When made 1937

Horse Power

Owners Joseph Constantine S. S. Line. Ltd

Port belonging to Middlesbrough

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

Manufacturers of Steel

Appley- Lodingham Steel Co., Ltd., Steel Co of Scotland

(Letter for Record S)

Heating Surface of Boilers

1325 sq ft

Is forced draught fitted

No

Coal or Oil fired

Coal

Description of Boilers

One single ended multitubular

Working Pressure

200 lbs

Tested by hydraulic pressure to

350 lbs

Date of test

21-9-37

No. of Certificate

739

Can each boiler be worked separately

✓

No. and Description of safety valves to each boiler

35 ft

No. and Description of safety valves to each boiler

Two spring loaded

Pressure to which they are adjusted

per Rule 7.7 sq ft

as fitted 7.94 sq ft

Pressure to which they are adjusted

205 lbs

Are they fitted with easing gear

Yes

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

✓

Least distance between boilers or uptakes and bunkers or woodwork

1'-6"

Is oil fuel carried in the double bottom under boilers

No

Least distance between shell of boiler and tank top plating

2'-3"

Is the bottom of the boiler insulated

Yes

Least internal dia. of boilers

11'-9 3/8"

Length

10'-6"

Shell plates: Material

Steel

Tensile strength

29-33 tons

Thickness

1 1/16"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end L.D.R

Seams

T.R. dbl straps

Diameter of rivet holes in

circ. seams 1 1/8"

long. seams 1 1/8"

Pitch of rivets

3 1/4"

Percentage of strength of circ. end seams

plate 65.5

rivets 45.6

Percentage of strength of circ. intermediate seam

plate —

rivets —

Percentage of strength of longitudinal joint

plate 86.0

rivets 87.0

combined 89.3

Working pressure of shell by Rules

204.5 lbs

Thickness of butt straps

outer 13/16"

inner 15/16"

No. and Description of Furnaces in each Boiler

Two corrugated

Material

Steel

Tensile strength

26-30

Smallest outside diameter

41 1/4"

Thickness of plain part

top —

bottom —

Thickness of plates

crown 1 1/2"

bottom 1 1/2"

Description of longitudinal joint

weld

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

None

Working pressure of furnace by Rules

209.5 lbs

Plates in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

1 1/4"

Pitch of stays 22" x 15"

Are stays secured

Double nuts

Working pressure by Rules

205 lbs

Plates: Material

front Steel

back Steel

Tensile strength

26-30 tons

Thickness

3/4"

Pitch of stay tubes in nests

8 7/8"

Pitch across wide water spaces

14 1/2"

Working pressure

front 210.5 lbs

back 255.0 lbs

Plates to combustion chamber tops: Material

Steel

Tensile strength

29-33 tons

Depth and thickness of girder

Size

7 1/2" x 2 @ 3/4"

Length as per Rule

27"

Distance apart

10"

No. and pitch of stays

Working pressure by Rules

202 lbs

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons

Thickness: Sides

1/16"

Back

2 3/32"

Top

1/16"

Bottom

7/8"

Pitch of stays to ditto: Sides

10 x 8"

Back

9 1/2 x 9 3/4"

Top

10 x 8"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

201 lbs

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons

Thickness

1"

Lower back plate: Material

Steel

Tensile strength

26-30 tons

Thickness

7/8"

Pitch of stays at wide water space

14 1/2 x 9 3/4"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

206 lbs

Main stays: Material

Steel

Tensile strength

29-33 tons

At body of stay,

2 3/4"

No. of threads per inch

6

Area supported by each stay

330 lbs

Over threads

—

Screw stays: Material

Steel

Tensile strength

26-30 tons

Working pressure by Rules

205 lbs

No. of threads per inch

9

Area supported by each stay

90 lbs

At turned off part,

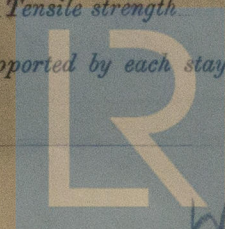
1 3/4"

Over threads

—

Area supported by each stay

90 lbs

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Foundation



Working pressure by Rules 201 lbs Are the stays drilled at the outer ends No Margin stays: Diameter At turned off part, -  
 No. of threads per inch 9 Area supported by each stay 115.9 sq Working pressure by Rules 214 lbs  
 Tubes: Material S.D. Steel External diameter Plain 3 1/4" Thickness 89 No. of threads per inch 9  
 Pitch of tubes 8 7/8" Working pressure by Rules 208.5 lbs Manhole compensation: Size of opening  
 shell plate 20 1/8" x 16 1/8" Section of compensating ring 11 3/8" x 1 1/2" No. of rivets and diameter of rivet holes 32 @ 1 3/8"  
 Outer row rivet pitch at ends 10" Depth of flange if manhole flanged 3 3/4" 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 229  
 stays ✓ Inner radius of crown ✓ Working pressure by Rules ✓  
 How connected to shell ✓ Size of doubling plate under dome ✓ Diameter of rivet holes and  
 of rivets in outer row in dome connection to shell ✓  
 Type of Superheater None Manufacturers of Tubes ✓  
Steel forgings ✓  
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  
 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 ✓  
 Rules ✓ Pressure to which the safety valves are adjusted ✓ Hydraulic test pressure ✓  
 tubes ✓ forgings and castings ✓ and after assembly in place ✓ Are drain cocks ✓  
 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 ✓

The foregoing is a correct description,

THE NORTH EASTERN MARINE ENGINEERING CO., LTD.

John Neill

Manufactured

Dates of Survey 1937  
 During progress of work in shops - - May 14, 26, June 1, 7, 11, July 2, 23  
 while building Aug. 11, 17, 24, Sep. 2, 7, 21  
 board vessel - - -  
 Are the approved plans of boiler and superheater forwarded herewith Yes  
 (If not state date of approval.)  
 Total No. of visits 13

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. Same Vessel. No. Rpt No 8417

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under Special Survey, in accordance with the Rules and approved plan; the materials and workmanship are good, on completion it was tested to 350 lbs per square inch water pressure, fitted on board in an efficient manner, tried under steam and found satisfactory.

Survey Fee ... £ 9 : 0 : 0When applied for 6 JAN 1938

Travelling Expenses (if any) £ : : }

When received, 1/2 1938

J. R. Sellers

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

Assigned

See Other Rpt 95796



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