

# REPORT ON BOILERS.

No. 81622

Received at London Office

5 - AUG 1927

of writing Report

192

When handed in at Local Office

1927

Port of

NEWCASTLE-ON-TYNE.

in Surrey held at

Walker on Tyne

Date, First Survey

3rd Feb

Last Survey

26 July

1927

(Number of Visits)

Gross

Net

15/27

on the Steel Screw Steamer "OILSHIPPER"

17

ster

Built at Walker

By whom built S. H. W. R. Ld

Yard No. 1234 When built 1927

ines made at

Walker

By whom made Swan Hunter, Higham, Richardson & Co

Engine No. 1234 When made 1927

ers made at

Walker

By whom made Swan Hunter, Higham, Richardson & Co

Boiler No. 1234 When made 1927

7.27

inal Horse Power

482.

Owners

Port belonging to London

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

2.27

Manufacturers of Steel

Steel Company of Scotland Ltd

Deighton, Huet & Co Ltd

(Letter for Record 5)

Total Heating Surface of Boilers

6900 sq ft

Is forced draught fitted

yes

Coal or Oil fired

oil

Name and Description of Boilers

3. S. Ended Cylindrical Multitubular.

Working Pressure 200 lbs

Tested by hydraulic pressure to

350 lbs

Date of test

8 June 27

No. of Certificate

154

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

oil fuel

No. and Description of safety valves to each boiler

2 direct spring high lift

Area of each set of valves per boiler

per Rule 10.82

as fitted 11.88

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

no

Smallest distance between boilers or uptakes and bunkers or woodwork

21"

Is oil fuel carried in the double bottom under boilers

yes

Smallest distance between shell of boiler and tank top plating

2'-6"

Is the bottom of the boiler insulated

no

Largest internal dia. of boilers

14'-3 9/16"

Length

11'-6"

Shell plates: Material

Steel

Tensile strength 30/34 tons

Thickness

1 7/32"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end DR LAP

Diag. seams

T.R.D.B.S

Diameter of rivet holes in

circ. seams 13/8"

long. seams 15/16"

Pitch of rivets

4" 3/77"

8" 15/16"

Percentage of strength of circ. end seams

plate 68.58%

rivets 42.70%

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate 85.31%

rivets 89.32%

combined 86.48%

Working pressure of shell by Rules 200 lbs

Thickness of butt straps

outer 15/16"

inner 1 1/16"

No. and Description of Furnaces in each Boiler

3. Deighton - Corrugated - fourley

Material

Steel

Tensile strength

26/30 tons

Smallest outside diameter

41 13/16"

Length of plain part

top

bottom

Thickness of plates

crown 19"

bottom 32"

Description of longitudinal joint

weld

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

none

Working pressure of furnace by Rules

206 lbs

End plates in steam space: Material

Steel

Tensile strength

26 to 30

Thickness

1 1/4"

Pitch of stays 19 1/2" x 18 5/8"

How are stays secured

Double nuts & washers

Working pressure by Rules

201 lbs

Tube plates: Material

front Steel

back Steel

Tensile strength

26 to 30 tons

Thickness

1 13/16"

Lean pitch of stay tubes in nests

9 3/8"

Pitch across wide water spaces

13 1/2"

Working pressure

front 206 lbs

back 270 lbs

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32 tons

Depth and thickness of girder

Centre

9 1/8" x 1 1/4"

Length as per Rule

31 17/32"

Distance apart

9"

No. and pitch of stays

Each

2 of 9 3/4"

Working pressure by Rules

200 lbs

Combustion chamber plates: Material

Steel

Tensile strength

26/30 tons

Thickness: Sides

5 3/32"

Back

2 1/32"

Top

2 3/32"

Bottom

2 3/32"

Pitch of stays to ditto: Sides

9 1/2" x 8"

Back

9" x 8"

Top

9 3/4" x 9"

Are stays fitted with nuts or riveted over

Nuts

Working pressure by Rules

206 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

15/16"

Pitch of stays at wide water space

14 5/8" x 8"

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

260 lbs

Main stays: Material

Steel

Tensile strength

28 - 32 tons

Diameter

At body of stay,

3 3/8"

No. of threads per inch

6

Area supported by each stay 19 3/4" x 18 1/2" / 360 sq in

Working pressure by Rules

201 lbs

Screw stays: Material

Steel

Tensile strength

26/30 tons

Diameter

At turned off part,

1 5/8"

No. of threads per inch

9

Area supported by each stay 76 sq in

Working pressure by Rules 200 lbs Are the stays drilled at the outer ends no Margin stays: Diameter <sup>(At turned off part, or Over threads)</sup> 1 3/4"  
 No. of threads per inch 9 Area supported by each stay 89 sq" Working pressure by Rules 203 lbs  
 Tubes: Material Crow External diameter <sup>Plain</sup> 2 1/2" <sup>Stay</sup> 2 1/2" Thickness 3/8" No. of threads per inch 9  
 Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules 217 lbs Manhole compensation: Size of opening in shell plate 20 x 16 Section of compensating ring 10 1/2" x 1 7/32" + flange No. of rivets and diameter of rivet holes 32 x 1 1/2" dia  
 Outer row rivet pitch at ends 10 1/4" Depth of flange if manhole flanged 2 3/4" Steam Dome: Material Iron  
 Tensile strength Thickness of shell Description of longitudinal joint  
 Diameter of rivet holes Pitch of rivets Percentage of strength of joint <sup>Plate</sup> <sup>Rivets</sup>  
 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**

Manufacturers of <sup>Tubes</sup> <sup>Steel castings</sup>  
 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 casing 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

The foregoing is a correct description,  
 SWAN, HUNTER & WIGHAM RICHARDSON, LTD. Manufacturer.  
*E. J. Hoody*

Dates of Survey <sup>(During progress of work in shops - -)</sup> <sup>(During erection on board vessel - - -)</sup> *See Encl Report* Are the approved plans of boiler and superheater forwarded here <sup>(If not state date of approval.)</sup>  
 Total No. of visits

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

*These Boilers built under Special Survey the material and workmanship found good and efficient. The boilers have been satisfactorily fitted up on board the vessel.*

*Please return Boiler plan to Newcastle office for reference re duplicate.*

*See encl report*  
 Survey Fee £ 192 When applied for, 192  
 Travelling Expenses (if any) £ When received, 192

*L. G. Shelleross*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 9 AUG 1927

Assigned See Encl report attached

