

# REPORT ON BOILERS.

No. 83867

Received at London Office 28 FEB 1929

NEWCASTLE-ON-TYNE

Date of writing Report

192

When handed in at Local Office

12/2/1929 Port of

No. in Survey held at Book.

Wallsend-on-Tyne

Date, First Survey

18 April 12 Feb 1929

(Number of Visits)

Gross 7434

Net 4529

on the New Steel M.V. "Hopemount"

Port

Built at

Wallsend-on-Tyne

By whom built

Swan Hunter W.R. Co

Yard No. 1354

When built 1929

Engines made at

Wallsend-on-Tyne

By whom made

Wallsend Slipway & E. Coy. Ltd.

Engine No. 849

When made 1929

Boilers made at

Wallsend-on-Tyne

By whom made

Wallsend Slipway & E. Coy. Ltd.

Boiler No. 849

When made 1929

Indicated Horse Power

Boilers only 1444

Owners

Port belonging to

Newcastle

## ULTITUBULAR BOILERS - MAIN, AUXILIARY OR DONKEY.

Manufacturers of Steel

D. Cobble & Sons Ltd.

(Letter for Record

S.)

Total Heating Surface of Boilers

2656 sq ft

Is forced draught fitted

no

Coal or Oil fired

oil

Material and Description of Boilers

Two single ended.

Working Pressure

120 lbs

Tested by hydraulic pressure to

230 lbs

Date of test 31-10-28

No. of Certificate 312

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

oil fuel only

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

as fitted 4.95

Pressure to which they are adjusted

120

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 or uptakes and bunkers or woodwork

1'-6"

Is oil fuel carried in the double bottom under boilers

yes

Smallest distance between shell of boiler and tank top plating

2'-0"

Is the bottom of the boiler insulated

no

Largest internal dia. of boilers

11'-10 5/8"

Length

11'-0"

Shell plates: Material

Steel

Tensile strength

29-33 tons

Thickness

1/4"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end D.R.

Diag. seams

D.R.D.B.S.

Diameter of rivet holes in

circ. seams 1/8"

long. seams 1/8"

Pitch of rivets

3.31"

4 3/4"

Percentage of strength of circ. end seams

plate 43.6

rivets 82.0

Percentage of strength of circ. intermediate seam

plate 81.5

rivets 82

Percentage of strength of longitudinal joint

plate 90.4

combined 90.4

Working pressure of shell by Rules

120.4 lbs

Thickness of butt straps

outer 9/16"

inner 1/2"

No. and Description of Furnaces in each Boiler

Two corrugated (Daington)

Material

Steel

Tensile strength

26-30 tons

Smallest outside diameter

3'-5 1/4"

Length of plain part

top

bottom

Thickness of plates

crown 3/8"

bottom 3/8"

Description of longitudinal joint

weld

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

none

Working pressure of furnace by Rules

128 lbs.

End plates in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

1/4"

Pitch of stays 2'-6" dia

How are stays secured

D. Nuts

Working pressure by Rules

121 lbs.

End plates: Material

front Steel

back Steel

Tensile strength

26-30 tons

Thickness

3/4"

3/4"

Mean pitch of stay tubes in nests

12 9/16"

Pitch across wide water spaces

13 3/4" x 8 1/4"

Working pressure

front 129 lbs

back 127 lbs

Orders to combustion chamber tops: Material

Steel

Tensile strength

29-33 tons

Depth and thickness of girder

Centre

2 @ 6 7/8" x 3 1/4"

Length as per Rule

2'-5 1/4"

Distance apart

9 3/4"

No. and pitch of stays

Each

2 @ 10 1/4"

Working pressure by Rules

121 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons

Thickness: Sides

19/32"

Back

19/32"

Top

19/32"

Bottom

19/32"

Pitch of stays to ditto: Sides

10 1/4" x 9 3/4"

Back

10 1/4" x 9 1/2"

Top

10 1/4" x 9 3/4"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

121 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons

Thickness

3/4"

Lower back plate: Material

Steel

Tensile strength

26-30 tons

Thickness

2 3/32"

Pitch of stays at wide water space

14" x 9 1/2"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

140 lbs.

Main stays: Material

Steel

Tensile strength

28-32 tons

Working diameter

At body of stay, or Over threads

3"

No. of threads per inch

6

Area supported by each stay

560 sq in

Working pressure by Rules

120 lbs

Screw stays: Material

Steel

Tensile strength

26-30 tons

Working diameter

At turned off part, or Over threads

1 1/2"

No. of threads per inch

9

Area supported by each stay

100 sq in



Lloyd's Register Foundation

004440-004449-0053

Working pressure by Rules 126 lbs Are the stays drilled at the outer ends no Margin stays: Diameter <sup>At turned off part.</sup> 15/8" or <sup>Over threads</sup> 15/8"  
 No. of threads per inch 9 Area supported by each stay 115 sq" Working pressure by Rules 132 lbs.  
 Tubes: Material W. Iron External diameter <sup>Plain</sup> 3" <sup>Stay</sup> 3" Thickness 10 wls No. of threads per inch 9  
 Pitch of tubes 4 1/8" x 4 1/4" Working pressure by Rules 15 wls <sup>rests</sup> 15 wls Manhole compensation: Size of opening in shell plate 16" x 20" Section of compensating ring 6" x 1 1/16" No. of rivets and diameter of rivet holes 44 @ 1/8"  
 Outer row rivet pitch at ends 4 3/4" Depth of flange if manhole flanged 2 1/16" 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 <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 none. 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 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

The foregoing is a correct description,  
 FOR THE WALLSEND SLIPWAY & ENGINEERING CO. LIMITED.  
A. King Manufacturer.

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

**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 efficiently installed & fixed in the vessel, examined under steam & safety valves adjusted.

Survey Fee <sup>charged on</sup> 14 : ~~14~~ : 0. When applied for. 192  
 Travelling Expenses (if any) ✓ : : When received. 192

William R. Butler  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 5 MAR 1929

Assigned see Minute on how Rpt 83867 attached

