

REPORT ON BOILERS.

No. 97437

Received at London Office MAY 11 1939

Date of writing Report

19

When handed in at Local Office

10/5/39 Port of

NEWCASTLE-ON-TYNE

No. in Survey held at

Newcastle

Date, First Survey

27 July 1937

Last Survey

4/5/1939

Reg. Book.

on the *Steel Se. Vessel*

BRITISH INFLUENCE

(Number of Visits)

Gross 8431
Net 4855

Master

Built at

Newcastle

By whom built

Swan Hunter & Wigham Richardson

Yard No.

1594

When built

1939

Engines made at

Newcastle

By whom made

do

Engine No.

1592

When made

1939

Boilers made at

do

By whom made

do

Boiler No.

1594

When made

1939

Nominal Horse Power

101

Owners

British Tanker Co

Port belonging to

LONDON

Two FURNACE OIL FIRED.

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

The Steel Coy of Scotland

(Letter for Record S.)

Total Heating Surface of Boilers

1520 sq ft

Is forced draught fitted

Yes

Coal or Oil fired

Oil fired

No. and Description of Boilers

One Single Ended

Working Pressure

150 lb

Tested by hydraulic pressure to

275 lb

Date of test

14/2/39

No. of Certificate

808

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

Oil fired

No. and Description of safety valves to each boiler

Two 2 1/4" Improved High Lift. Spring loaded.

Area of each set of valves per boiler

per Rule 6.95 sq in

as fitted 7.94

Pressure to which they are adjusted

150 lb

Are they fitted with easing gear

Yes

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

No main Boilers

Smallest distance between boilers or uptakes and bunkers or woodwork

2'-10"

Is oil fuel carried in the double bottom under boilers

Yes

Smallest distance between shell of boiler and tank top plating

2'-10"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

11'-4 1/2"

Length

11'-6"

Shell plates: Material

Steel

Tensile strength

30/34 tons

Thickness

3/4"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end DR. lap.

inter. none

long. seams

TR. Dbl. butt straps

Diameter of rivet holes in

circ. seams 7/8"

long. seams 13/16"

Pitch of rivets

2.89"

5.75"

Percentage of strength of circ. end seams

plate 69.79

rivets 42.43

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate 85.86

rivets 86.41

combined 89.02

Working pressure of shell by Rules

150 lb

Thickness of butt straps

outer 9/16"

inner 11/16"

No. and Description of Furnaces in each Boiler

2. Doughton Corrugated

Material

Steel

Tensile strength

26/30 tons

Smallest outside diameter

37 3/16"

Length of plain part

top 2'-5" c.c. bottom

Thickness of plates

crown 13/32"

bottom 5/8" c.c. bottom

Description of longitudinal joint

Furnaces. fire welded

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

none

Working pressure of furnace by Rules

155 lb

End plates in steam space: Material

Steel

Tensile strength

26/30 tons

Thickness

7/8"

Pitch of stays

16 3/8" x 1 1/4"

How are stays secured

Dbl. nuts & washers

Working pressure by Rules

151 lb

Tube plates: Material

front Steel

back

Tensile strength

26/30 tons

Thickness

7/8" 5/8"

Mean pitch of stay tubes in nests

9.375"

Pitch across wide water spaces

13 1/2" x 7 1/2"

Working pressure

front 158 lb

back 156 lb

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32 tons

Depth and thickness of girder

at centre

7 3/4" x 1 1/4"

Length as per Rule

29 2 1/32"

Distance apart

9 1/2"

No. and pitch of stays

in each

2 @ 9"

Working pressure by Rules

152 lb

Combustion chamber plates: Material

Steel

Tensile strength

26/30 tons

Thickness: Sides

5/8"

Back

23/32"

Top

5/8"

Bottom

5/8"

Pitch of stays to ditto: Sides

9 1/2" x 9 1/2"

Back

9 x 8"

Top

9 1/2" x 9"

Are stays fitted with nuts or riveted over

Working pressure by Rules

150 lb

C.C. sides.

Front plate at bottom: Material

Steel

Tensile strength

26/30 tons

Thickness

7/8"

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

7/8"

Pitch of stays at wide water space

14 3/4" x 9"

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

210 lb.

Main stays: Material

Steel

Tensile strength

28/32 tons

Diameter

At body of stay

Two top stays 2 1/2"

No. of threads per inch

6

Area supported by each stay

(15 3/4" x 14 3/4") - 3.26 sq in

Working pressure by Rules

151 lb

Screw stays: Material

Steel

Tensile strength

26/30 tons

Diameter

At turned off part

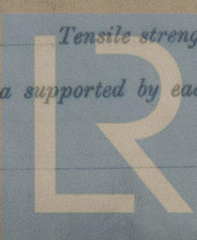
1 5/8" x 1 1/2"

No. of threads per inch

9

Area supported by each stay

(9 1/2" x 9 1/2") - 1.73 sq in

Lloyd's Register
W560-0129

Working pressure by Rules 172 lbs Are the stays drilled at the outer ends No Margin stays: Diameter { 1 5/8" }
 No. of threads per inch 9 Area supported by each stay (10 3/4" x 9) - 1.73 sq. in. Working pressure by Rules 160 lbs
 Tubes: Material IRON External diameter { Plain 2 1/2" Stay 2 1/2" } Thickness { 10. W.G. } No. of threads per inch 9
 Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules 229 lbs. Manhole compensation: Size of opening in
 shell plate 20" x 16" Section of compensating ring 7 3/8" x 3/4" x 2" No. of rivets and diameter of rivet holes 32 x 1 1/8"
 Outer row rivet pitch at ends 8" Depth of flange if manhole flanged 2 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 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 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 forgings and 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

FOR The foregoing is a correct description,
 SWAN, HUNTER, & WILKINSON
 Manufacturer.

Dates of Survey { During progress of work in shops - - - } Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
 while building { During erection on board vessel - - - } Total No. of visits
See Index Report 26/8/36
for 1514 British Resolution.

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. British Resolution
British Tenacity

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
The Boiler has been built under special survey in accordance with the Rules and approved plans, and the material & workmanship are good. The Boiler is fitted on top of the oil fuel bunker in the Boiler Space forward of the Engine Room having access from the top platform of the Eng. Room. The Boiler is fitted for burning oil fuel, flash point above 150°F. The Safety valves have been adjusted under steam to 150 lbs. per sq. inch.

Survey Fee ... £ 10-2-0 } When applied for, 62 Rpt 48
 Travelling Expenses (if any) £ : : } When received, 19

A Watt
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 23 MAY 1939
 Assigned See Navc. 7E. 97437

