

REPORT ON BOILERS.

No. 81948

Received at London Office

24 OCT 1927

of writing Report

192

When handed in at Local Office

192

Port of Newcastle-on-Tyne.

Survey held at

Wallsend-on-Tyne

Date, First Survey

27 March 1927

Last Survey

Oct 14th 1927

on the

New Steel S.S. British Endeavour

(Number of Visits)

Gross 4580
Net 2641

ster

Built at

Walker

By whom built

Armstrong Whitworth & Co Ltd

When built

1924

ines made at

Wallsend

By whom made

Wallsend Slipways & Co Ltd

Engine No.

When made

1924

lers made at

Wallsend

By whom made

Wallsend Slipways & Co Ltd

Boiler No.

When made

1924

and nominal Horse Power

422

Owners

British Tanker Coy Ltd

Port belonging to

London

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Steel Company of Scotland Ltd

(Letter for Record S)

al Heating Surface of Boilers

1022

Is forced draught fitted

no

Coal or Oil fired

oil

and Description of Boilers

One single ended

Working Pressure

120 lbs

tested by hydraulic pressure to

230 lbs

Date of test

No. of Certificate

Can each boiler be worked separately

yes

ea of Firegrate in each Boiler

Oil fired only

No. and Description of safety valves to each boiler

Two spring loaded

ea of each set of valves per boiler

per Rule 11.4

Pressure to which they are adjusted

125 lbs

Are they fitted with easing gear

yes

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

no

allest distance between boilers or uptakes and bunkers or woodwork

2'-3"

Is oil fuel carried in the double bottom under boilers

yes

allest distance between shell of boiler and tank top plating

2'-0"

Is the bottom of the boiler insulated

yes

argest internal dia. of boilers

10'-4 3/4"

Length

10'-6"

Shell plates: Material

Steel

Tensile strength

28 to 32 tons

ickness

1/4"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end D.R

g. seams

D.R. D.B.S.

Diameter of rivet holes in

circ. seams 13/16"

long. seams 13/16"

Pitch of rivets

3.08"

centage of strength of circ. end seams

plate 43.4

rivets 43.4

Percentage of strength of circ. intermediate seam

plate

centage of strength of longitudinal joint

plate 82

rivets 83.2

Working pressure of shell by Rules

123.6 lbs

ickness of butt straps

outer 1/4"

inner 1/4"

No. and Description of Furnaces in each Boiler

Two Corrugated (Deighton)

aterial

Steel

Tensile strength

26 to 30 tons

Smallest outside diameter

2'-11 1/4"

ength of plain part

top

Thickness of plates

3/8"

Description of longitudinal joint

weld

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

none

Working pressure of furnace by Rules

149.5 lbs

nd plates in steam space: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1"

Pitch of stays

19 1/2" x 20 1/2"

ow are stays secured

Double nuts

Working pressure by Rules

121.2 lbs

be plates: Material

front Steel

back Steel

Tensile strength

26 to 30 tons

Thickness

3/4"

ean pitch of stay tubes in nests

12 3/4" x 8 1/4"

Pitch across wide water spaces

13 3/4" x 8 1/4"

Working pressure

front 122.5 lbs

back 135 lbs

rders to combustion chamber tops: Material

Steel

Tensile strength

28 to 32 tons

Depth and thickness of girder

centre

2 @ 7/8" x 6 5/8"

Length as per Rule

2'-6"

Distance apart

9 1/8"

No. and pitch of stays

each

2 @ 8 5/8"

Working pressure by Rules

124 lbs

Combustion chamber plates: Material

Steel

ensile strength

26 to 30 tons

Thickness: Sides

9/16"

Back

5/8"

Top

9/16"

Bottom

9/16"

itch of stays to ditto: Sides

9 3/8" x 8 5/8"

Back

8 1/4" x 8 1/2"

Top

8 7/8" x 9 1/8"

Are stays fitted with nuts or riveted over

both

orking pressure by Rules

128 lbs

Front plate at bottom: Material

Steel

Tensile strength

26 to 30 tons

ickness

3/4"

Lower back plate: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1 1/16"

itch of stays at wide water space

14" x 8 1/4"

Are stays fitted with nuts or riveted over

nuts

orking Pressure

144 lbs

Main stays: Material

Steel

Tensile strength

28 to 32 tons

diameter

At body of stay, or over threads

2 3/4"

No. of threads per inch

6

Area supported by each stay

400 sq"

orking pressure by Rules

142.5 lbs

Screw stays: Material

Steel

Tensile strength

26 to 30 tons

diameter

At turned off part, or over threads

1 3/8"

No. of threads per inch

9

Area supported by each stay

40 sq"

W421-0162

Lloyd's Register Foundation

Working pressure by Rules 130 lbs Are the stays drilled at the outer ends no Margin stays: Diameter ^{At turned off part.} 1 1/2" or ^{Over threads} 1 1/2"
 No. of threads per inch 9 Area supported by each stay 11 1/4" x 8 1/4" Working pressure by Rules 135 lbs
 Tubes: Material Iron External diameter ^{Plain} 3" Thickness 10 W.G. No. of threads per inch 9
 Pitch of tubes 1 1/8" x 1 1/4" Working pressure by Rules 138 lbs Manhole compensation: Size of opening in shell plate 20" x 16" Section of compensating ring 16 1/2" x 1 1/2" No. of rivets and diameter of rivet holes 50 @ 1 3/16"
 Outer row rivet pitch at ends 1 1/2" Depth of flange if manhole flanged 2 1/4" 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} ^{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 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,
 FOR THE WALLSEND SLIPWAY & ENGINEERING CO. LIMITED.
A. Haining Manufacturer.
 DIRECTOR

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.) yes.
 Total No. of visits

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This Boiler has been built under Special Survey. Materials & Workmanship good, Hydraulic test satisfactory. It has been securely fixed in place & safety valves adjusted under steam.

Survey Fee ... £ : : When applied for, 192
 Travelling Expenses (if any) £ : : When received, 192

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

Committee's Minute TUES. 25 OCT 1927
 Assigned See p. 6 of attached