

REPORT ON BOILERS.

No. 81948

Received at London Office

24 OCT 1927

Report

192

When handed in at Local Office

Oct 15th 1927

192

Port of Newcastle-on-Tyne.

Survey held at

Wallsend-on-Tyne

Date, First Survey

21st March 1927

Last Survey

Oct 15th 1927

1927

on the

New Steel S.S. "British Endeavour"

(Number of Visits

Gross 4580

Tons

Net 2641

Built at

Walker

By whom built

Armstrong Whitworth & Co. Ltd.

Yard No. 1025

When built 1924

made at

Wallsend

By whom made

Wallsend Shipway & E. Coy. Ltd.

Engine No. 843

When made 1924

made at

Wallsend

By whom made

Wallsend Shipway & E. Coy. Ltd.

Boiler No. 843

When made 1924

Horse Power

122

Owners

British Tanker Coy. Ltd.

Port belonging to

London

TUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Steel Company of Scotland Ltd.

(Letter for Record

5

Painting Surface of Boilers

5538

Is forced draught fitted

yes

Coal or Oil fired

oil

Description of Boilers

Two Single ended

Working Pressure

200 lbs

Hydraulic pressure to

350 lbs

Date of test

5-7-27

No. of Certificate

163

Can each boiler be worked separately

yes

Firegrate in each Boiler

O.F. only

No. and Description of safety valves to each boiler

Two spring loaded

each set of valves per boiler

(per Rule

19.4

Pressure to which they are adjusted

205 lbs

Are they fitted with easing gear

yes

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

no

distance between uptakes and bunkers or woodwork

2-3"

Is oil fuel carried in the double bottom under boilers

no

distance between shell of boiler and tank top plating

2'-0"

Is the bottom of the boiler insulated

yes

internal dia. of boilers

15' 9 1/2"

Length

12'-0"

Shell plates: Material

Steel

Tensile strength

30 to 34 tons

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

D.R.

T.R.D.B.S.

Diameter of rivet holes in

circ. seams

1 3/8"

long. seams

1 3/8"

Pitch of rivets

5.94"

9 1/4"

age of strength of circ. end seams

plate

65.2

rivets

46.8

Percentage of strength of circ. intermediate seam

plate

rivets

age of strength of longitudinal joint

plate

85.1

rivets

85.15

Working pressure of shell by Rules

201 lbs

age of butt straps

outer

15 3/8"

inner

15 3/8"

No. and Description of Furnaces in each Boiler

Three Corrugated (Dughton)

Tensile strength

26-30 tons

Smallest outside diameter

3'-11 1/4"

of plain part

top

15 3/8"

bottom

15 3/8"

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

none

Working pressure of furnace by Rules

203 lbs

plates in steam space: Material

Steel

Tensile strength

26 to 30

Thickness

1 3/8"

Pitch of stays

21" x 20 1/2"

are stays secured

Double nuts

Working pressure by Rules

206 lbs

plates: Material

front

Steel

back

Tensile strength

26 to 30 tons

Thickness

1 3/8"

Working pressure

front

212 lbs

back

210 lbs

pitch of stay tubes in nests

1 1/2" x 10 1/8"

Pitch across wide water spaces

13 1/2" x 4 1/4"

Working pressure

front

212 lbs

back

210 lbs

plates to combustion chamber tops: Material

Steel

Tensile strength

28-32 tons

Depth and thickness of girder

9 3/4"

length as per Rule

2'-8"

Distance apart

9 3/4"

No. and pitch of stays

204 lbs

Working pressure by Rules

204 lbs

Combustion chamber plates: Material

Steel

Thickness

3/4"

Top

1/16"

Bottom

2 1/2"

Both

of stays to ditto: Sides

10" x 1 1/16"

Back

8 3/8" x 1 1/16"

Top

10" x 1 1/16"

Are stays fitted with nuts or riveted over

Both

Working pressure by Rules

204 lbs

Front plate at bottom: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1/8"

Lower back plate: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1/8"

of stays at wide water space

14" x 8 3/8"

Are stays fitted with nuts or riveted over

Nuts

Main stays: Material

Steel

Tensile strength

28 to 32 tons

Area supported by each stay

430.5 sq"

At body of stay, or Over threads

3 1/2"

No. of threads per inch

6

Area supported by each stay

26 to 30 tons

At turned off part, or Over threads

1 1/2"

No. of threads per inch

9

Area supported by each stay

61.45 sq"

Working pressure by Rules

224 lbs

Screw stays: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1/8"

Area supported by each stay

61.45 sq"

Working Pressure

230 lbs

Main stays: Material

Steel

Tensile strength

28 to 32 tons

Area supported by each stay

430.5 sq"

At body of stay, or Over threads

3 1/2"

No. of threads per inch

6

Area supported by each stay

26 to 30 tons

At turned off part, or Over threads

1 1/2"

No. of threads per inch

9

Area supported by each stay

61.45 sq"

Working pressure by Rules

224 lbs

Screw stays: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1/8"

Area supported by each stay

61.45 sq"

At body of stay, or Over threads

3 1/2"

No. of threads per inch

6

Area supported by each stay

26 to 30 tons

At turned off part, or Over threads

1 1/2"

No. of threads per inch

9

Working pressure by Rules 20 1/2 lbs Are the stays drilled at the outer ends no ✓ Margin stays: Diameter { At turned off part. 1 3/4" ✓
 No. of threads per inch 9 ✓ Area supported by each stay 89.5 sq" Working pressure by Rules 20 1/2 lbs ✓
 Tubes: Material Iron External diameter { Plain 2 1/2" ✓ Thickness { 1/16", 3/16", 1/8" ✓ No. of threads per inch 9 ✓
 Pitch of tubes 3 3/4" x 3 5/8" ✓ Working pressure by Rules 232 lbs ✓ Manhole compensation: Size of opening 14" @ 1 3/8" ✓
 shell plate 20" x 16" ✓ Section of compensating ring 22" x 1 1/2" ✓ No. of rivets and diameter of rivet holes 44 @ 1 3/8" ✓
 Outer row rivet pitch at ends 9 1/4" ✓ Depth of flange if manhole flanged 3 3/2" ✓ Steam Dome: Material none.
 Tensile strength 6000 Thickness of shell 1/16" Description of longitudinal joint Butt
 Diameter of rivet holes 1/4" Pitch of rivets 2" Percentage of strength of joint { Plate 100% ✓
 Rivets 100% ✓
 Internal diameter 16" Working pressure by Rules 232 lbs ✓ Thickness of crown 1/16" No. and diameter of rivets 44 @ 1 3/8" ✓
 stays 4 Inner radius of crown 16" Working pressure by Rules 232 lbs ✓
 How connected to shell Butt Size of doubling plate under dome 16" x 16" Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 3/8" @ 2"

Type of Superheater none. Manufacturers of { Tubes Butt
 Steel castings Butt
 Number of elements 1 Material of tubes Iron Internal diameter and thickness of tubes 2 1/2" x 1/16"
 Material of headers Iron Tensile strength 6000 Thickness 1/16" Can the superheater be shut off from the boiler yes
 the boiler be worked separately yes Is a safety valve fitted to every part of the superheater which can be shut off from the boiler yes
 Area of each safety valve 1 sq. in. Are the safety valves fitted with easing gear yes Working pressure as per Rules 232 lbs
 Rules 232 lbs Pressure to which the safety valves are adjusted 232 lbs Hydraulic test pressure 232 lbs
 tubes 1 castings 1 and after assembly in place yes Are drain cocks or valves fitted to free the superheater from water where necessary yes
 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.

Dates of Survey { During progress of work in shops - - See index Report
 while building { During erection on board vessel - - See index Report
 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) yes
 Total No. of visits 1 DIRECTOR

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 are securely fixed in place & Safety valves adjusted under steam.

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

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

Committee's Minute TUES. 25 OCT 1927

Assigned See index Report attached