

REPORT ON BOILERS.

No. 11907

Received at London Office

AUG 4 1937

Date of writing Report

1937

When handed in at Local Office 3. 8. 1937

Port of

Belfast

No. in Survey held at

Belfast

Date, First Survey

7 Oct. 1936

Last Survey

3-8-37

1937

Reg. Book.

(Number of Visits

25)

Gross 8470-35

Tons

Net 4978-70

on the

BRITISH SECURITY

Master

Built at

Govan

By whom built

Harland & Wolff Ltd

Yard No.

9746

When built

1937

Engines made at

Glasgow

By whom made

Harland & Wolff Ltd

Engine No.

974

When made

1937

Boilers made at

Belfast

By whom made

Harland & Wolff Ltd

Boiler No.

9746

When made

1937

Nominal Horse Power

Owners

British Tanker Co Ltd

Port belonging to

London

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Colvilles Ltd

(Letter for Record S)

Total Heating Surface of Boilers

2602

Is forced draught fitted

Yes

Coal or Oil fired or Both gas

No. and Description of Boilers

One cylindrical with exhaust gas flue in centre

Working Pressure

150 lbs

Tested by hydraulic pressure to

275 lb

Date of test

20-7-37

No. of Certificate

1033

Can each boiler be worked separately

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

1-2 1/2 double opening High Lift (app)

Area of each set of valves per boiler

per Rule 9.85

as fitted 11.88

Pressure to which they are adjusted

150

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

Is oil fuel carried in the

deep tank

Yes

Smallest distance between shell of boiler and tank top plating

1'-6"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

13'-4 3/4"

Length

11'-6"

Shell plates: Material

S

Tensile strength

29/33 tons

Thickness

29/32

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end DR

Long. seams

T.R.D.B.

Diameter of rivet holes in

circ. seams 1 1/4"

Pitch of rivets

3.012

Percentage of strength of circ. end seams

plate 64.5

rivets 50.6

Percentage of strength of circ. intermediate seam

plate 85.7

Percentage of strength of longitudinal joint

plate 85.7

rivets 92.6

Working pressure of shell by Rules

152 lb

Thickness of butt straps

outer 1 1/4"

No. and Description of Furnaces in each Boiler

Two Dighton

Material

S

Tensile strength

24/30

Smallest outside diameter

2'-11 7/8"

Length of plain part

top

Thickness of plates

crane 7/16"

Description of longitudinal joint

Weld

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

Working pressure of furnace by Rules

174 lb

End plates in steam space: Material

S

Tensile strength

24/30 tons

Thickness

1 1/32"

Pitch of stays

20 1/2 x 16 1/2

How are stays secured

Double nuts

Working pressure by Rules

165 lb

Tube plates: Material

front S

Tensile strength

24/30 tons

Thickness

29/32

Mean pitch of stay tubes in nests

9.8"

Pitch across wide water spaces

13 3/4"

Working pressure

front 163 lb

Girders to combustion chamber tops: Material

S

Tensile strength

28/32 tons

Depth and thickness of girder

at centre

8 x 13 1/4"

Length as per Rule

30 1/32"

Distance apart

11 3/4"

No. and pitch of stays

in each

3 x 7 1/4"

Working pressure by Rules

159 lb

Combustion chamber plates: Material

S

Tensile strength

24/30 tons

Thickness: Sides

1 1/16"

Back

23/32"

Top

1 1/16"

Bottom

3/4"

Pitch of stays to ditto: Sides

7 1/4 x 10 1/2"

Back

9 x 8"

Top

11 3/4 x 7 1/4"

Are stays fitted with nuts or riveted over

CC controls stays mounted over inside. All others riveted.

Working pressure by Rules

167 lb

Front plate at bottom: Material

S

Tensile strength

24/30 tons

Thickness

29/32

Lower back plate: Material

S

Tensile strength

24/30 tons

Thickness

15/16"

Pitch of stays at wide water space

13"

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

289 lb

Main stays: Material

S

Tensile strength

28/32 tons

Diameter

At body of stay, or over threads

2 5/8"

No. of threads per inch

6

Area supported by each stay

310"

Working pressure by Rules

160 lb

Screw stays: Material

S

Tensile strength

24/30 tons

Diameter

At turned off part, or over threads

1 1/2" 1 5/8" 2"

No. of threads per inch

9

Area supported by each stay

76" 85.25"



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Working pressure by Rules 1654 Are the stays drilled at the outer ends *no* Margin stays: Diameter { At turned off part, 1 1/8" or Over threads }
No. of threads per inch 9. Area supported by each stay 94" Working pressure by Rules 1606
Tubes: Material *W.I.* External diameter { Plain 2 3/4" C 2 1/2" W. } Thickness { 1/4" 3/16" 1/8" 3/32" } No. of threads per inch 9.
Pitch of tubes 4 x 3 3/8" C. 3 1/4" x 3 5/8" W. Working pressure by Rules 1784 Manhole compensation: Size of opening
shell plate 16 1/2" x 12 1/2" Section of compensating ring 2'8" x 3'-0" x 1 3/16" No. of rivets and diameter of rivet holes 28 - 1 1/4"
Outer row rivet pitch at ends 9" Depth of flange if manhole flanged 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
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

Number of elements Material of tubes Manufacturers of { Tubes Steel castings } 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 *yes*

The foregoing is a correct description,
FOR HARLAND AND WOLFF, LIMITED

Dates of Survey { During progress of work in shops - - - 17. 27. June 23 July 20 Aug 5 }
{ During erection on board vessel - - - }
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
Total No. of visits 25

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

This boiler has been constructed under special survey & to an approved design. The workmanship & materials are good. It has been tested by hydraulic pressure in accordance with the Rules & is eligible in my opinion for use on a vessel classed with the Society. It is intended for use on a vessel building at Gouan.

This boiler has been efficiently installed on the M.V. "British Security". The safety valves adjusted under steam & tested for accumulation. The boiler has been examined under working conditions & found satisfactory.

T. O'Meara

Survey Fee ... £ 17 : 6 : When applied for, 3 - 8 - 1927
Travelling Expenses (if any) £ : : When received, 25 - 5 - 1927

Charles H. W. Hunter

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 11 JAN 1928

Assigned See No. 59141



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