

# REPORT ON BOILERS.

Received at London Office

29 NOV 1948

Date of writing Report

19

When handed in at Local Office

25/11/48

Port of

D Belfast

In visits, please see Rpt. etc.

No. in Survey held at Reg. Book.

D Belfast

Date, First Survey

Last Survey

19

on the

M.V. "British Strength"

(Number of Visits)

Tons } Gross  
Net

Master

Built at

D Belfast

By whom built

Harland & Wolff Ltd

Yard No.

1365

When built

1948

Engines made at

D Belfast

By whom made

Harland & Wolff Ltd

Engine No.

1365

When made

1948

Boilers made at

D Belfast

By whom made

Harland & Wolff Ltd

Boiler No.

1365

When made

1948

Nominal Horse Power

M.N. Total 341

Owners

British Tanker Co Ltd

Port belonging to

London

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Coburns

(Letter for Record S.)

Total Heating Surface of Boilers

2047 x 2 sq ft

Is forced draught fitted

Yes

Coal or Oil fired

Oil & kerosene

No. and Description of Boilers

2 Cylindrical smoke tube type

Working Pressure

150 lb sq in

Tested by hydraulic pressure to

275 lb

Date of test

23.6.48

No. of Certificate

1390

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

1 - 2 1/4" dia improved high lift double safety valve

Area of each set of valves per boiler

per Rule 7.76 sq in

as fitted 8.0 sq in

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

Smallest distance between boilers or uptakes and bunkers or woodwork

Ample

Is oil fuel carried in the double bottom under boilers

Boilers on flat above E Room

Smallest distance between shell of boiler and tank top plating

Ample

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

12' - 10 3/16"

Length

11' - 6"

Shell plates: Material

Steel

Tensile strength

29-33 tons sq in

Thickness

29/32"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

DR.

long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams 1 3/32"

long. seams 1 1/32"

Pitch of rivets

3.08"

Percentage of strength of circ. end seams

plate 64.5

rivets 53.0

Percentage of strength of circ. intermediate seam

plate 84.3

rivets 104

Percentage of strength of longitudinal joint

plate 84.3

rivets 104

Working pressure of shell by Rules

155 lb sq in

Thickness of butt straps

outer 28/32"

inner 27/32"

No. and Description of Furnaces in each Boiler

2 Diphtan

Material

Steel

Tensile strength

26-30 tons sq in

Smallest outside diameter

3' - 8"

Length of plain part

top

bottom

Thickness of plates

crown 1/2"

Description of longitudinal joint

Yoke weld

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

Yes

Working pressure of furnace by Rules

163 lb sq in

End plates in steam space: Material

Steel

Tensile strength

26-30 tons sq in

Thickness

15/16"

Pitch of stays

16" x 15"

How are stays secured

Nuts - in and out

Working pressure by Rules

As approved

Tube plates: Material

front Steel

back Steel

Tensile strength

26-30 tons sq in

Thickness

7/8"

Mean pitch of stay tubes in nests

8 5/16"

Pitch across wide water spaces

15 1/2"

Working pressure

front As approved

Girders to combustion chamber tops: Material

Steel

Tensile strength

28-32 tons sq in

Depth and thickness of girder

at centre

9 1/2" x 1 1/32"

Length as per Rule

32 1/2"

Distance apart

9 1/8"

No. and pitch of stays

in each

Welded

Working pressure by Rules

As approved

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons sq in

Thickness: Sides

3/4"

Back

3/4"

Top

3/4"

Bottom

3/4"

Pitch of stays to ditto:

Sides 8 1/2" x 8 1/2" x 9"

Back 8 1/4" x 9 1/2"

Top

Yes

Are stays fitted with nuts or riveted over at shell others welded

Working pressure by Rules

As approved

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons sq in

Thickness

7/8"

Lower back plate: Material

Steel

Tensile strength

26-30 tons sq in

Thickness

15/16"

Pitch of stays at wide water space

16 1/4" x 9 1/2"

Are stays fitted with nuts or riveted over

Welded

Working Pressure

As approved

Main stays: Material

Steel

Tensile strength

28-32 tons sq in

Diameter

At body of stay, 2 3/4"

Over threads

No. of threads per inch

6

Area supported by each stay

Various

Working pressure by Rules

As approved

Screw stays: Material

Steel

Tensile strength

26-30 tons sq in

Diameter

At turned off part, 1 1/2"

Over threads

No. of threads per inch

9

Area supported by each stay

9 1/2" x 8 1/4"

Welded at shell only

Welded in Combustion Chambers

Working pressure by Rules *As approved* Are the stays drilled at the outer ends  Margin stays: Diameter <sup>(At turned off part)</sup> *13/4" x 2"* or <sup>Over threads</sup>

No. of threads per inch *welded* Area supported by each stay *14" x 9 1/2"* Working pressure by Rules *As approved*

Tubes: Material *H.D.S.* External diameter <sup>Plain</sup> *2 1/2"* Thickness *10 L.S.G.* <sup>(on plan)</sup> No. of threads per inch *9*

Pitch of tubes *3 3/4" x 3 5/8"* Working pressure by Rules *As approved* Manhole compensation: Size of opening in shell plate *13 3/4"* Section of compensating ring *2'-8" x 2'-4" x 7/8"* No. of rivets and diameter of rivet holes *Welded to shell*

Outer row rivet pitch at ends  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 <sup>Plate</sup>  <sup>Rivets</sup>

Internal diameter  Working pressure by Rules  Thickness of crown  No. and diameter of stays

How connected to shell  Inner radius of crown  Working pressure by Rules

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 forgings</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

Area of each safety valve  Are the safety valves fitted with casing 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

The foregoing is a correct description, *[Signature]* Manufacturer

Dates of Survey <sup>During progress of work in shops - -</sup>  Are the approved plans of boiler and superheater forwarded herewith *10.5.41* (If not state date of approval.)

while building <sup>During erection on board vessel - -</sup>  Total No. of visits

Is this Boiler a duplicate of a previous case *Yes* If so, state Vessel's name and Report No. *1362 G. Rpt No. 14543. British Security. Rpt No 14587. Jalta. Rpt No. 14623.*

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

*These boilers have been built under special survey in accordance with the Rules and approved plan. The materials and workmanship are good. The boilers have been efficiently installed on board the vessel, the safety valves adjusted under steam for a working pressure of 150 lb. and a satisfactory accumulation test carried out. The oil burning installation, remote controls and steam extinguishing system have been tested and found satisfactory.*

Survey Fee *See machinery report* When applied for, 19

Travelling Expenses (if any) £ : : When received, 19

*[Signature]*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI. 17 DEC 1940**

Assigned *See F.E. mch. rpt.*

