

REPORT ON BOILERS.

Shet. No. 32584
Mach. No. 16498

Received at London Office JAN - 2 1939

Date of writing Report 13th Dec. 1938 When handed in at Local Office 30th December 1938

Port of Middlesbrough

No. in Reg. Book. Survey held at

Stockton

Date of First Survey October 3rdLast Survey December 5th 1938

on the

M/V BRITISH LIBERTY

(Number of Visits 8)

Gross

Tons

Net

Master

Built at

Hawerton Hill

By whom built

James S.B. Co. Ltd.

Yard No.

284

When built

1939

Engines made at

Sunderland

By whom made

Wm. Doxford & Sons

Engine No.

209

When made

1939

Boilers made at

Stockton

By whom made

Stockton C.E. & Hiley Boilers Ltd

Boiler No.

6295

When made

1938

Nominal Horse Power

684

Owners

British Tanker Co. Ltd.

Port belonging to

London

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Steel Company of Scotland Ltd.

(Letter for Record

Total Heating Surface of Boilers

1523

Is forced draught fitted

Yes

Coal or Oil fired

oil

No. and Description of Boilers

Working Pressure

150

Tested by hydraulic pressure to

275

Date of test

5.12.38

No. of Certificate

6961

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

Two direct Spring

Area of each set of valves per boiler

per Rule

11.6

as fitted

14.1

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

Smallest distance between boilers or uptakes and bunkers or woodwork

Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating

(Blow in upper recess)

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

11.4 7/16"

Length

11.6"

Shell plates: Material

S

Tensile strength

29-33

Thickness

27/32"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

3 1/4"

Long. seams

T.R. D.B.S.

Diameter of rivet holes in

circ. seams

1"

long. seams

7/8"

Pitch of rivets

6 1/8"

Percentage of strength of circ. end seams

plate

69.2

rivets

48.8

Percentage of strength of circ. intermediate seam

plate

85.7

rivets

93.2

Percentage of strength of longitudinal joint

plate

85.7

rivets

93.2

Working pressure of shell by Rules

152

Thickness of butt straps

outer

19/32"

inner

23/32"

No. and Description of Furnaces in each Boiler

2 cf.

Material

S

Tensile strength

26-30

Smallest outside diameter

3'-2 1/4"

Length of plain part

top

bottom

Thickness of plates

crown

13/32"

bottom

Description of longitudinal joint

weld

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

Working pressure of furnace by Rules

151

End plates in steam space: Material

S

Tensile strength

26-30

Thickness

27/32"

Pitch of stays

14 x 15 1/2"

How are stays secured

A. Nuts & washers

Working pressure by Rules

150

Tube plates: Material

front

S

back

Tensile strength

26-30

Thickness

27/32"

1/16"

Mean pitch of stay tubes in nests

10 3/8"

Pitch across wide water spaces

13 1/2"

Working pressure

front

200

back

162

Girders to combustion chamber tops: Material

S

Tensile strength

28-32

Depth and thickness of girder

at centre

8 x 1 1/4"

Length as per Rule

27 7/32"

Distance apart

8"

No. and pitch of stays

in each

20 7 1/2"

Working pressure by Rules

214

Combustion chamber plates: Material

S

Tensile strength

26-30

Thickness: Sides

5/8"

Back

23/32"

Top

5/8"

Bottom

5/8"

Pitch of stays to ditto: Sides

9 3/8" x 9"

Back

9" x 8"

Top

8" x 7 1/2"

Are stays fitted with nuts or riveted over

Working pressure by Rules

159 lbs.

Front plate at bottom: Material

S

Tensile strength

26-30

Thickness

27/32"

Lower back plate: Material

S

Tensile strength

26-30

Thickness

27/32"

Pitch of stays at wide water space

13 1/2" x 9"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

220

Main stays: Material

S

Tensile strength

28-32

Diameter

At body of stay,

2 7/8"

No. of threads per inch

6

Area supported by each stay

208

Working pressure by Rules

188

Screw stays: Material

S

Tensile strength

26-30

Diameter

At turned off part,

1 1/2"

No. of threads per inch

9

Area supported by each stay

84.4

Working pressure by Rules 155 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, or Over threads 1 7/8"
No. of threads per inch 9 Area supported by each stay 97" Working pressure by Rules 157
Tubes: Material Welded Iron External diameter { Plain 2 1/2" Thickness { 10 W.G. No. of threads per inch 9
Pitch of tubes 3 1/4" x 3 1/4" Working pressure by Rules 209 lbs. Manhole compensation: Size of opening in
shell plate 20" x 16" Section of compensating ring 9" x 1" No. of rivets and diameter of rivet holes 32" x 1 1/4"
Outer row rivet pitch at ends 8 3/4" 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 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 22 inclusive for boilers been complied with yes.

For and on behalf of _____
The foregoing is a correct description of _____
Manufacturer: _____

Dates of Survey { During progress of work in shops - - } Oct. 18. Nov. 2. 10. 21. 26. 30. Dec. 5 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) 17. 6. 37.
while building { During erection on board vessel } _____
Total No. of visits _____

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. Ph. No. 6295 Mch. Rpt 16446.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been made under Special Survey in accordance with the approved plans the requirements of the Rules. The materials & workmanship are good & a satisfactory hydraulic test has been held. The boiler is to be forwarded to Sunderland for fitting on board.

This boiler has been securely fitted on board the vessel. Runned under steam & safety valves adjusted in accordance with rule requirements.

In recommendation please see Mch. Rpt

Robt. Fraser.

Survey Fee ... £ 10 : 3 : 0 When applied for, 31/12/1936
Travelling Expenses (if any) £ 0 : 0 : 0 When received, 23/2/1937

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 7 MAR 1937

Assigned See I.E. machy rpt.



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