

REPORT ON BOILERS.

No. 45490

7 JUL 1926

Received at London Office

Date of writing Report 2nd July 1926 When handed in at Local Office 2/7/1926 Port of Glasgow

No. in Reg. Book.

Surrey held at

Glydebank

Date, First Survey

22nd Jan (1925)

Last Survey

1st July

1926.

on the

S. M. V. "British Diplomat"

(Number of Visits 121)

Tons

Gross 6484

Net 4555

Master

Built at

Glydebank

By whom built

John Brown & Co. Ltd.

Yard No. 507

When built 1926

Engines made at

Glydebank

By whom made

John Brown & Co. Ltd.

Engine No. 507

When made 1926

Boilers made at

Glydebank

By whom made

John Brown & Co. Ltd.

Boiler No. 507

When made 1926

Nominal Horse Power

776

Owners

British Tankers Co. Ltd.

Port belonging to

London

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

David Colville & Sons Ltd.

(Letter for Record 8.)

Total Heating Surface of Boiler

1191.3 sq ft

Is forced draught fitted

Yes

Coal or Oil fired

Oil

No. and Description of Boilers

Two, single ended

Working Pressure

120

Tested by hydraulic pressure to

230

Date of test

24.9.25

No. of Certificate

16934

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

2-High lift spring loaded

Area of each set of valves per boiler

per Rule

4.36 sq ft

as fitted

4.8 sq ft

Pressure to which they are adjusted

125

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

On main deck

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

On main deck

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

9'-0"

Length

10'-0"

Shell plates: Material

S

Tensile strength

28-32

Thickness

5/8"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end J.R.

inter. none

long. seams

T.R.L.

Diameter of rivet holes in

circ. seams

31/32"

long. seams

31/32"

Pitch of rivets

3.219"

3 25/32"

Percentage of strength of circ. end seams

plate

70.0

rivets

68.2

Percentage of strength of circ. intermediate seam

plate

74.4

rivets

76.8

Percentage of strength of longitudinal joint

plate

74.4

rivets

76.8

combined

Working pressure of shell by Rules

122

Thickness of butt straps

outer none

inner

No. and Description of Furnaces in each Boiler

2-Deighton

Material

S

Tensile strength

26-30

Smallest outside diameter

33 3/4"

Length of plain part

top

bottom

Thickness of plates

crown

3/8"

bottom

Description of longitudinal joint

weld

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

none

Working pressure of furnace by Rules

183

End plates in steam space: Material

S

Tensile strength

26-30

Thickness

13/16"

Pitch of stays

16 1/2" x 18 1/4"

How are stays secured

J.N. & W.

Working pressure by Rules

150

Tube plates: Material

front S

back S

Tensile strength

26-30

26-30

Thickness

13/16"

23/32"

Mean pitch of stay tubes in nests

10 1/2"

Pitch across wide water spaces

14"

Working pressure

front 206

back 169

Girders to combustion chamber tops: Material

S

Tensile strength

28-32

Depth and thickness of girder

at centre

6 1/2" x 1 1/2"

Length as per Rule

30 1/2"

Distance apart

9"

No. and pitch of stays

in each

2-9 1/2"

Working pressure by Rules

121

Combustion chamber plates: Material

S

Tensile strength

26-30

Thickness: Sides

9/16"

Back

9/16"

Top

9/16"

Bottom

9/16"

Pitch of stays to ditto: Sides

9" x 9 1/2"

Back

9" x 9"

Top

9" x 9 1/2"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

127

Front plate at bottom: Material

S

Tensile strength

26-30

Thickness

13/16"

Lower back plate: Material

S

Tensile strength

26-30

Thickness

13/16"

Pitch of stays at wide water space

14" x 9"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

216

Main stays: Material

S

Tensile strength

28-32

Diameter

At body of stay,

2"

or

Over threads

No. of threads per inch

6

Area supported by each stay

222 sq in

Working pressure by Rules

120

Screw stays: Material

S

Tensile strength

26-30

Diameter

At turned off part,

1 1/2"

or

Over threads

No. of threads per inch

9

Area supported by each stay

85.5 sq in

Working pressure by Rules 146 ✓ Are the stays drilled at the outer ends 40 ✓ Margin stays: Diameter { At turned off part, 1 1/2" ✓
No. of threads per inch 9 ✓ Area supported by each stay 103 sq" ✓ Working pressure by Rules 130 ✓
Tubes: Material Iron ✓ External diameter { Plain 3" ✓ Thickness 8 W.G. ✓ No. of threads per inch 9 ✓
Pitch of tubes 4 1/4" ✓ Working pressure by Rules 250 ✓ Manhole compensation: Size of opening in
shell plate 21" x 17" ✓ Section of compensating ring 31" x 28" x 1 1/4" ✓ No. of rivets and diameter of rivet holes 40 - 3 1/32" ✓
Outer row rivet pitch at ends 4" ✓ Depth of flange if manhole flanged 4" ✓ Steam Dome: Material Iron ✓
Tensile strength 702 ✓ Thickness of shell 1/4" ✓ Description of longitudinal joint
Diameter of rivet holes 3/16" ✓ Pitch of rivets 1 1/2" ✓ Percentage of strength of joint { Plate 100% ✓
Internal diameter 24" ✓ Working pressure by Rules 250 ✓ Thickness of crown 1/4" ✓ No. and diameter of
stays 4 ✓ Inner radius of crown 12" ✓ Working pressure by Rules 250 ✓
How connected to shell 4" ✓ Size of doubling plate under dome 4" ✓ Diameter of rivet holes and pitch
of rivets in outer row in dome connection to shell 4" ✓

Type of Superheater Sugden ✓ Manufacturers of { Tubes ✓
Number of elements 48 ✓ Material of tubes S. D. Steel ✓ Internal diameter and thickness of tubes .994 x 10 W.G. ✓
Material of headers Forged Steel ✓ Tensile strength 24,280 ✓ Thickness 5/8" ✓ Can the superheater be shut off and
the boiler be worked separately 70 ✓ Is a safety valve fitted to every part of the superheater which can be shut off from the boiler 70 ✓
Area of each safety valve 4 1/2" Lon 4-5-25 ✓ Are the safety valves fitted with easing gear 70 ✓ Working pressure as per
Rules 230 ✓ Pressure to which the safety valves are adjusted 125 ✓ Hydraulic test pressure:
tubes 400 ✓ and after assembly in place 230 ✓ Are drain cocks or valves fitted
to free the superheater from water where necessary 70 ✓

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with 70 ✓

John Brown & Company, Limited.
The foregoing is a correct description,

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.) 70 ✓
Total No. of visits 121 ✓

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These Donkey boilers have been built under special survey in accordance with the approved plan, and the Society's Rules & requirements, the materials and workmanship are good, they have been securely fitted on board and their safety valves adjusted under steam to 125 lbs.

Survey Fee ... £ 8-8-0 ✓ When applied for, 26/6/1926 ✓
Travelling Expenses (if any) £ 0-0-0 ✓ When received, 11/7/1926 ✓

Entered also on Machinery Report

Jas. Cairns
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 6 - JUL 1926

Assigned See accompanying machinery report.



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Foundation