

REPORT ON BOILERS.

No. 95512

Received at London Office

OCT 12 1937

Date of writing Report

19

When handed in at Local Office

11/10/37

Port of

NEWCASTLE-ON-TYNE

No. in Survey held at
Reg. Book.

Wallsend

Date, First Survey

9 Feb

Last Survey

4 Oct 1937

on the

SS "BECKENHAM"

(Number of Visits)

Tons

Gross

Net

Master

Built at

Dundee

By whom built

Caledon. S B & Ing Co

Yard No.

367

When built

1937

Engines made at

Wallsend

By whom made

North Eastern Marine Eng Co. Ltd.

Engine No.

2876

When made

1937

Boilers made at

Wallsend

By whom made

North Eastern Marine Eng Co. Ltd.

Boiler No.

2876

When made

1937

Nominal Horse Power

404

Owners

Britann S.S. Co.

Port belonging to

London.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Steel Co of Scotland.

(Letter for Record

S

Total Heating Surface of Boilers

4340

Is forced draught fitted

Yes

Coal or Oil fired

Coal

No. and Description of Boilers

Two single ended multitubular

Working Pressure

220 lbs

Tested by hydraulic pressure to

380 lbs

Date of test

27-7-37

No. of Certificate

727

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

46

No. and Description of safety valves to each boiler

Two spring loaded

Area of each set of valves per boiler

per Rule

11.54

as fitted

11.88

Pressure to which they are adjusted

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

10'-3"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

2'-4"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

14'-3 1/4"

Length

11'-6"

Shell plates: Material

Steel

Tensile strength

29-33 tons

Thickness

1 3/8"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end

inter.

long. seams

T.R. oil straps

Diameter of rivet holes in

circ. seams

1 7/16"

Pitch of rivets

4"

Percentage of strength of circ. end seams

plate

rivets

64

46.8

Percentage of strength of circ. intermediate seam

plate

rivets

—

Percentage of strength of longitudinal joint

plate

rivets

85.4

88.8

88.5

Working pressure of shell by Rules

221 lbs

Thickness of butt straps

outer

1 1/16"

inner

1 3/16"

No. and Description of Furnaces in each Boiler

Three brighton

Material

Steel

Tensile strength

26-30 tons

Smallest outside diameter

41 9/16"

Length of plain part

top

—

bottom

—

Thickness of plates

crown

2 1/2"

bottom

Description of longitudinal joint

weld

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

none

Working pressure of furnace by Rules

230 lbs

End plates in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

1 3/8"

Pitch of stays

21 x 19"

How are stays secured

double nuts

Working pressure by Rules

221 lbs

Tube plates: Material

front

back

Steel

Tensile strength

26-30 tons

Thickness

2 5/32"

Mean pitch of stay tubes in nests

9 1/2"

Pitch across wide water spaces

14 3/4"

Working pressure

front

back

226 lbs

236 lbs

Girders to combustion chamber tops: Material

Steel

Tensile strength

29-33 tons

Depth and thickness of girder

at centre

10' x 2 @ 25/32"

Length as per Rule

34"

Distance apart

9 1/2"

No. and pitch of stays

in each

2 @ 10 3/16"

Working pressure by Rules

250 lbs

Combustion chamber plates: Material

Steel

Tensile strength

26/30 tons

Thickness: Sides

25/32"

Back

23/32"

Top

25/32"

Bottom

25/32"

Pitch of stays to ditto: Sides

10 3/16' x 9 1/2"

Back

9' x 9"

Top

10 3/16' x 9 1/2"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

223 lbs

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons

Thickness

3 1/8"

Lower back plate: Material

Steel

Tensile strength

26-30 tons

Thickness

1 5/16"

Pitch of stays at wide water space

15 1/2' x 9"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

225 lbs

Main stays: Material

Steel

Tensile strength

28-32 tons

Diameter

At body of stay

3 1/4"

No. of threads per inch

6

Area supported by each stay

399

Working pressure by Rules

232 lbs

Screw stays: Material

Steel

Tensile strength

26-30 tons

Diameter

At turned off part

1 7/8' x 2"

No. of threads per inch

9

Area supported by each stay

81" x 96.78"

Working pressure by Rules 256 *lbs* Are the stays drilled at the outer ends *no* Margin stays: Diameter { At turned off part, *2 1/2"* or Over threads *2 1/2"*
 No. of threads per inch *9* Area supported by each stay *110.25"* Working pressure by Rules *258 lbs*
 Tubes: Material *S.D. Steel* External diameter { Plain *3"* Stay *3"* Thickness { *3/16"* *5/16"* No. of threads per inch *9*
 Pitch of tubes *4 1/4" x 4 1/8"* Working pressure by Rules *235 lbs* Manhole compensation: Size of opening in
 END plate *16 x 12"* Section of compensating ring — No. of rivets and diameter of rivet holes —
 Outer row rivet pitch at ends — Depth of flange if manhole flanged *4"* 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 *N.E. Marine Smoke Tube* Manufacturers of { Tubes *Tubes Ltd.*
 Bradingham Steel Co. Ltd.
 Steel forgings
 Steel castings
 Number of elements *98* Material of tubes *S.D. Steel* Internal diameter and thickness of tubes *15 7/8" x 2 1/2" / m*
 Material of headers *Steel* Tensile strength *26-30 tons* Thickness *1 1/8"* Can the superheater be shut off and
 the boiler be worked separately *no* 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 *3 1/4"* Are the safety valves fitted with easing gear *Yes* Working pressure as per
 Rules *220 lbs* Pressure to which the safety valves are adjusted *225 lbs* Hydraulic test pressure:
 tubes *1500 lbs* Headers *660 lbs* forgings and castings and after assembly in place *440 lbs* 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,

John Newell Manufacturer.

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

Is this Boiler a duplicate of a previous case *Yes* If so, state Vessel's name and Report No. *Blackheath Rpt No 93815*

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, they have been fitted on board in an efficient manner, tried under working conditions and found satisfactory.*

Survey Fee ... *Charged on*
 Travelling Expenses (if any) *machinery Rpt*
 When applied for, *19*
 When received, *19*

J.R. Sellers
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *TUE 2 NOV 1987*

Assigned *See Sur 9007*