

## REPORT ON BOILERS.

No. 98746

SEP - 3 1940

Received at London Office

Date of writing Report

19

When furnished in at Local Office

2/ 8/ 40

Port of

NEWCASTLE-ON-TYNE

No. in Survey held at  
Reg. Book.

Newcastle on Tyne

Date, First Survey

19 Jan'y

Last Survey

1/ 8/ 1940

on the

S/S ECEBAT

(Number of Visits

)

Gross

691

Tons

Net

265

Built at Newcastle on Tyne By whom built Swan, Hunter &amp; Wigham Richardson Ld

Yard No. 1662 When built 1940-

Engines made at

ditto

By whom made

ditto

Engine No. 1662 When made 1940

Boilers made at

ditto

By whom made

ditto

Boiler No. 1662 When made 1940

Nominal Horse Power

Owners

Port belonging to ISTANBUL

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

Manufacturers of Steel The Steel Coy of Scotland, and Appleby &amp; Frodingham Steel Co Letter for Record S.

Total Heating Surface of Boilers

2554 sq ft

Is forced draught fitted

Yes

Coal or Oil fired

Coal fired

No. and Description of Boilers

Two Single ended "Scotch"

Working Pressure

180 lbs.

Tested by hydraulic pressure to

320 lbs

Date of test

16/5/40

No. of Certificate

848.

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

34.5 sq ft

No. and Description of safety valves to each boiler

Two 2" Cockburn's Imp. High Lift.

Area of each set of valves per boiler

per Rule

4.09 sq in

as fitted

6.28 "

Pressure to which they are adjusted

180 lbs

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

3'0"

Is oil fuel carried in the double bottom under boilers

No.

Smallest distance between shell of boiler and tank top plating

no tank under boilers

Is the bottom of the boiler insulated

No

Largest internal dia. of boilers

11'1 1/4"

Length

11'0"

Shell plates: Material

Steel

Tensile strength

30 to 34 tons

Thickness

7/8"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end DR. overlap

long. seams T.R. Dble butt straps

Diameter of rivet holes in

circ. seams

1"

long. seams

15/16"

Pitch of rivets

3'24"

6'5/8"

Percentage of strength of circ. end seams

plate

69.13

rivets

42.47

Percentage of strength of circ. intermediate seam

plate

none

rivets

Percentage of strength of longitudinal joint

plate

85.84

rivets

85.55

combined

88.8

Thickness of butt straps

outer

21/32"

inner

29/32"

No. and Description of Furnaces in each Boiler

Two Beighton Corrugated

Material

Steel

Tensile strength

26 to 30 tons

Smallest outside diameter

3'0 15/16"

Length of plain part

top

5 1/4"

bottom

2'4" at C.C. bottom

Thickness of plates

crown

15/32"

bottom

cc both 1/16"

Description of longitudinal joint

Jare welded

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

None

End plates in steam space: Material

Steel

Tensile strength

26 to 30 tons

Thickness

29/32"

Pitch of stays

13 3/4" x 14 7/8"

How are stays secured

Nuts inside &amp; outside, and Screwed thro front end plate

Tube plates: Material

front

Steel

back

Steel

Tensile strength

26 to 30 tons

Thickness

29/32"

3/4"

Mean pitch of stay tubes in nests

9 3/8"

Pitch across wide water spaces

13 1/2"

Girders to combustion chamber tops: Material

Steel

Tensile strength

28 to 32 tons

Depth and thickness of girder

at centre

8 3/8" x 5 1/8" x two

Length as per Rule

30 9/16"

Distance apart

9"

No. and pitch of stays

in each

Two @ 9 3/4"

Combustion chamber plates: Material

Steel

Tensile strength

26 to 30 tons

Thickness: Sides

1/16"

Back

1/16"

Top

1/16"

Bottom

1/16"

Pitch of stays to ditto: Sides

9 1/2" x 9 1/2"

Back

9" x 9 3/4"

Top

9" x 9 3/4"

Are stays fitted with nuts or riveted over

with nuts.

Front plate at bottom: Material

Steel

Tensile strength

26 to 30 tons

Thickness

29/32"

Lower back plate: Material

Steel

Tensile strength

26 to 30 tons

Thickness

29/32"

Pitch of stays at wide water space

13 1/2" x 9 3/4"

(max at lower end)

14 1/4" x 9 3/4"

Are stays fitted with nuts or riveted over

with nuts

Main stays: Material

Steel

Tensile strength

28 to 30 tons

Diameter

At body of stay,

or

Over threads

2 3/8"

No. of threads per inch

6

Screw stays: Material

Steel

Tensile strength

26 to 30 tons

Diameter

At turned off part,

or

Over threads

1 3/4"

No. of threads per inch

9.

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Conts over.

Lloyd's Register  
Foundation

008953-008963-0097



Are the stays drilled at the outer ends *No.* Margin stays: Diameter { At turned off part, }  $1\frac{3}{4} \times 1\frac{7}{8}$  or Over threads

No. of threads per inch *9.*

Tubes: Material *Steel* External diameter { Plain }  $2\frac{1}{2}$  { Stay } Thickness { *9 w.g.* }  $\frac{1}{4} \times \frac{5}{16}$  No. of threads per inch *9.*

Pitch of tubes  $3\frac{3}{4} \times 3\frac{3}{4}$  Manhole compensation: Size of opening in shell plate  $16 \times 20$  Section of compensating ring  $19\frac{1}{8} \times \frac{7}{8}$  No. of rivets and diameter of rivet holes  $32 @ 1\frac{5}{16}$

Outer row rivet pitch at ends  $9\frac{1}{8}$  Depth of flange if manhole flanged  $2\frac{1}{2}$  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 Thickness of crown No. and diameter of stays Inner radius of crown

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 *None* Manufacturers of { Tubes Steel forgings 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

Area of each safety valve Is a safety valve fitted to every part of the superheater which can be shut off from the boiler

Pressure to which the safety valves are adjusted Are the safety valves fitted with easing gear

tubes forgings and castings and after assembly in place

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.  
*SWAN, HUNTER, & WILLIAMS* Manufacturer.  
*G. J. Stacey*

Dates of Survey { During progress of work in shops - - }  
 while building { During erection on board vessel - - } *See Machinery Report*

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) *15/12/39*

Total No. of visits

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

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

*The Boilers of this Vessel have been built under Special Survey in accordance with the Society's Rules and approved plan, satisfactorily fitted on board and tested under steam under working conditions. The materials and workmanship are good.*

*See also Machinery Rpt 4.*

Survey Fee ... £ *See Rpt 4* When applied for, *19*

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

*A. Watt*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *See minute on F.E. machinery*

Assigned