

## REPORT ON BOILERS.

No. 90775

Received at London Office

-5 DEC 1933

Writing Report

1<sup>st</sup> Dec 33

When handed in at Local Office

1<sup>st</sup> Dec 33

Port of

NEWCASTLE-ON-TYNE

Survey held at

Newcastle-on-Tyne

Date, First Survey

14 Sept

Last Survey

23. 11.

1933

on the

STEEL TWIN SC.

"TAIROA"

(Number of Visits)

Tons

Gross 7983

Net 5048

Built at

Newcastle

By whom built

Armstrong Whitworth &amp; Co. Ltd

Hard No.

When built

1920.7

made at

Newcastle

By whom made

R. E. Marine Eng. Co. Ltd

Engine No.

When made

1920

made at

Newcastle

By whom made

R. E. Marine Eng. Co. Ltd.

Boiler No.

When made

1920

Horse Power

1011

Owners

Shaw, Savill &amp; Albion Co. Ltd.

Port belonging to

Southampton

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

Materials of Steel

Fitting of Superheaters

(Letter for Record)

Heating Surface of Boilers

Is forced draught fitted

Coal or Oil fired

Description of Boilers

Working Pressure

by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately

Firegrate in each Boiler

No. and Description of safety valves to each boiler

of each set of valves per boiler

{ per Rule  
as fitted

Pressure to which they are adjusted

Are they fitted with easing gear

of donkey boilers, state whether steam from main boilers can enter the donkey boiler

at distance between boilers or uptakes and bunkers or woodwork

Is oil fuel carried in the double bottom under boilers

at distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

internal dia. of boilers

Length

Shell plates: Material

Tensile strength

ss

Are the shell plates welded or flanged

Description of riveting: circ. seams

{ end  
inter.

ams

Diameter of rivet holes in

{ circ. seams  
long. seams

Pitch of rivets

age of strength of circ. end seams

{ plate  
rivets

Percentage of strength of circ. intermediate seam

{ plate  
rivets

age of strength of longitudinal joint

{ plate  
rivets  
combined

Working pressure of shell by Rules

ss of butt straps

{ outer  
inner

No. and Description of Furnaces in each Boiler

l

Tensile strength

Smallest outside diameter

of plain part

{ top  
bottom

Thickness of plates

{ crown  
bottom

Description of longitudinal joint

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

Working pressure of furnace by Rules

ates in steam space: Material

Tensile strength

Thickness

Pitch of stays

re stays secured

Working pressure by Rules

lates: Material

{ front  
back

Tensile strength

Thickness

itch of stay tubes in nests

Pitch across wide water spaces

Working pressure

{ front  
back

s to combustion chamber tops: Material

Tensile strength

Depth and thickness of girder

re

Length as per Rule

Distance apart

No. and pitch of stays

Working pressure by Rules

Combustion chamber plates: Material

strength

Thickness: Sides

Back

Top

Bottom

f stays to ditto: Sides

Back

Top

Are stays fitted with nuts or riveted over

ng pressure by Rules

Front plate at bottom: Material

Tensile strength

ess

Lower back plate: Material

Tensile strength

Thickness

of stays at wide water space

Are stays fitted with nuts or riveted over

ng Pressure

Main stays: Material

Tensile strength

At body of stay,

No. of threads per inch

Area supported by each stay

Over threads

ng pressure by Rules

Screw stays: Material

Tensile strength

At turned off part,

No. of threads per inch

Area supported by each stay

Over threads

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Working pressure by Rules \_\_\_\_\_ Are the stays drilled at the outer ends \_\_\_\_\_ Margin stays: Diameter { At turned off part, or Over threads \_\_\_\_\_

No. of threads per inch \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_

Tubes: Material \_\_\_\_\_ External diameter { Plain \_\_\_\_\_ Stay \_\_\_\_\_ Thickness { \_\_\_\_\_ No. of threads per inch \_\_\_\_\_

Pitch of tubes \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_ Manhole compensation: Size of opening in shell plate \_\_\_\_\_ Section of compensating ring \_\_\_\_\_ No. of rivets and diameter of rivet holes \_\_\_\_\_

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 { Plate \_\_\_\_\_ Rivets \_\_\_\_\_

Internal diameter \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_ Thickness of crown \_\_\_\_\_ No. and diameter stays \_\_\_\_\_ Inner radius of crown \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_

How connected to shell \_\_\_\_\_ Size of doubling plate under dome \_\_\_\_\_ Diameter of rivet holes and of rivets in outer row in dome connection to shell \_\_\_\_\_

Type of Superheater *2. E. Marine Locomotive Tube type* Manufacturers of { Tubes *Stewart & Lloyd's* Headers *Prodingham Steel Co.* Steel castings \_\_\_\_\_

Number of elements *360* Material of tubes *40 Steel* Internal diameter and thickness of tubes *14 7/8 x 2 1/2*

Material of headers *Forged Steel* Tensile strength *26,000 tons/sq"* Thickness *1 1/2"* Can the superheater be shut off the boiler be worked separately *Yes* 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 *3.14 sq"* Are the safety valves fitted with easing gear *Yes* Working pressure a Rules *220 lbs./sq"* Pressure to which the safety valves are adjusted *225 lbs./sq"* Hydraulic test pres. tubes *1500 lbs./sq"* *castings* *660 lbs./sq"* and after assembly in place *550 lbs./sq"* Are drain cocks or valves to free the superheater from water where necessary *Yes*

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with ☒

The foregoing is a correct description, ☒

Manufac

Dates { During progress of work in shops - - } while building { During erection on board vessel - - }

*See Index Report.*

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

Total No. of visits

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

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

*Superheaters fitted to the main boilers; the materials and workmanship are good; hydraulic tests satisfactory. See also Report on Form Rpt. 9 herewith.*

Survey Fee ... £ *30: 0: 0*

Travelling Expenses (if any) £ : :

When applied for, *4 DEC 1933* 19 *34*

When received, *3.1* 19 *34*

*For Wm. Butter self, H.B. Forster.*

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute *TUE. 19 DEC 1933*

Assigned *See other Rpt. Nwc. 90775*



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