

## REPORT ON BOILERS.

No. 54968

Received at London Office

19 SEP 1934

Date of writing Report

19

When handed in at Local Office

18.9.1934

Port of Glasgow

No. in Survey held at

Grangemouth

Date, First Survey

5<sup>th</sup> May 31

Last Survey

17<sup>th</sup> Sept 1934

(Number of Visits 25)

Gross 729

5588 on the

S.S. ELKHOUND

Tons { Net 301

Master

Built at

Bristol

By whom built

C. Hill &amp; Son Ltd

Yard No. ✓

When built

1929

Engines made at

Clydebank

By whom made

Aitchison Blair &amp; Co.

Engine No. 181

When made

1934

Boilers made at

Glasgow

By whom made

D. Rowan &amp; Co.

Boiler No. 386

When made

1934

Nominal Horse Power

Owners Irvine Steamship Ltd

Port belonging to London

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

Manufacturers of Steel

(Letter for Record S)

Total Heating Surface of Boilers

1300

Is forced draught fitted

Coal or Oil fired Yes

No. and Description of Boilers

One single ended Cylinder return tube

Working Pressure

180 lbs

Tested by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

One pair 2 5/8" High Lift

Area of each set of valves per boiler

{ per Rule

15.7 sq in

Pressure to which they are adjusted

180 lbs

Are they fitted with casing 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

24"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

open floor

Is the bottom of the boiler insulated

No

Largest internal dia. of boilers

Length

Shell plates: Material

Tensile strength

Thickness

Are the shell plates welded or flanged

Description of riveting: circ. seams

{ end

Long. seams

Diameter of rivet holes in

{ circ. seams

Pitch of rivets

Percentage of strength of circ. end seams

{ plate

rivets

Percentage of strength of circ. intermediate seam

{ plate

rivets

Percentage of strength of longitudinal joint

{ plate

rivets

Working pressure of shell by Rules

Thickness of butt straps

{ outer

inner

No. and Description of Furnaces in each Boiler

Material

Tensile strength

Smallest outside diameter

Length of plain part

{ top

bottom

Thickness of plates

{ crown

bottom

Description of longitudinal joint

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

Working pressure of furnace by Rules

End plates in steam space: Material

Tensile strength

Thickness

Pitch of stays

How are stays secured

Working pressure by Rules

Tube plates: Material

{ front

back

Tensile strength

Thickness

Mean pitch of stay tubes in nests

Pitch across wide water spaces

Working pressure

{ front

back

Girders to combustion chamber tops: Material

Tensile strength

Depth and thickness of girder

at centre

Length as per Rule

Distance apart

No. and pitch of stays

in each

Working pressure by Rules

Combustion chamber plates: Material

Tensile strength

Thickness: Sides

Back

Top

Bottom

Pitch of stays to ditto: Sides

Back

Top

Are stays fitted with nuts or riveted over

Working pressure by Rules

Front plate at bottom: Material

Tensile strength

Thickness

Lower back plate: Material

Tensile strength

Thickness

Pitch of stays at wide water space

Are stays fitted with nuts or riveted over

Working Pressure

Main stays: Material

Tensile strength

Diameter

{ At body of stay,

or

Over threads

No. of threads per inch

Area supported by each stay

Working pressure by Rules

Screw stays: Material

Tensile strength

Diameter

{ At turned off part,

or

Over threads

No. of threads per inch

Area supported by each stay

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W1000-0021

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 \_\_\_\_\_

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 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** \_\_\_\_\_

Number of elements \_\_\_\_\_ Material of tubes \_\_\_\_\_ Manufacturers of { Tubes Steel castings } \_\_\_\_\_

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 \_\_\_\_\_

The foregoing is a correct description, \_\_\_\_\_

Dates { During progress of work in shops - - } \_\_\_\_\_ Are the approved plans of boiler and superheater forwarded herewith yes \_\_\_\_\_

of Survey while building { During erection on board vessel - - } \_\_\_\_\_ (If not state date of approval.)

**SEE ACCOMPANYING MACHINERY REPORT** \_\_\_\_\_

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.) This boiler has been properly secured on board and safety valves adjusted under steam to 180 lbs per sq. inch and found sound and tight

18/9/34

Survey Fee ... £ : ☒ : When applied for, 19

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

Committee's Minute **GLASGOW 18 SEP 1934**

Assigned See accompanying machinery report

G. E. Murdoch  
Engineer Surveyor to Lloyd's Register of Shipping.



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