

# REPORT ON BOILERS.

No. 73609



Received at London Office

9 FEB 1949

Date of writing Report

10

When handed in at Local Office

7-2-1949

Port of

GLASGOW

No. in Reg. Book. Survey held at

GLASGOW

Date, First Survey

6-10-48

Last Survey

19.1.49

(Number of Visits

Tons { Gross  
Net

Master

Built at **GOTHENBURG**

By whom built

**ERIKSSON & MEK VIKENSSON**

When built

Engines made at

By whom made

Engine No.

When made

Boilers made at

**GLASGOW**

By whom made

**BARCLAY CURLE, C.L.D.**

Boiler No.

When made

Nominal Horse Power

**282**

Owners

Port belonging to

## MULTITUBULAR BOILERS - ~~MAIN, AUXILIARY, OR~~ DONKEY.

Manufacturers of Steel

**COLVILLES & CO.**

(Letter for Record **S.**)

Total Heating Surface of Boilers

**2120 sq ft x 2**

Is forced draught fitted

Coal or Oil fired

No. and Description of Boilers

**2 Single ended multitubular**

Working Pressure **143 lbs**

Tested by hydraulic pressure to

**265 lbs**

Date of test

**19.1.49**

No. of Certificate

**22815**

Can each boiler be worked separately

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

Area of each set of valves per boiler

{ per Rule  
as fitted

Pressure to which they are adjusted

Are they fitted with easing gear

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

Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

Largest internal dia. of boilers

**13'-1 1/2"**

Length

**11'6"**

Shell plates: Material

**Steel**

Tensile strength **28-32 tons**

Thickness

**29/32**

Are the shell plates welded or flanged

Description of riveting: circ. seams

**DR**

long. seams

**TR DBS.**

Diameter of rivet holes in

{ circ. seams **1 1/8"**  
long. seams **1 1/8"**

Pitch of rivets

**3-6"**

Percentage of strength of circ. end seams

{ plate **69%**  
rivets **49.6%**

Percentage of strength of circ. intermediate seam

{ plate   
rivets

Percentage of strength of longitudinal joint

{ plate **83.4%**  
rivets **124.6%**  
combined **91.5%**

Working pressure of shell by Rules

**145 lbs**

Thickness of butt straps

{ outer **3/4"**  
inner **7/8"**

No. and Description of Furnaces in each Boiler

**2 Morrison Corrugation**

Material

**Steel**

Tensile strength

**26-30 tons**

Smallest outside diameter

**46.625"**

Length of plain part

{ top   
bottom

Thickness of plates

{ crown **1/2"**  
bottom **1/2"**

Description of longitudinal joint

**welded**

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

Working pressure of furnace by Rules

**154 lbs**

End plates in steam space: Material

**Steel**

Tensile strength

**26-30 tons**

Thickness

**29/32**

Pitch of stays **16 3/4" x 16 3/4"**

How are stays secured

**welded inside & outside as per plan**

Working pressure by Rules

**162 lbs**

Tube plates: Material

{ front **Steel**  
back **Steel**

Tensile strength

**26-30**

Thickness

**29/32**

Mean pitch of stay tubes in nests

**10 5/8"**

Pitch across wide water spaces

**14 x 8 3/8"**

Working pressure

{ front **153 lbs**  
back **168 lbs**

Girders to combustion chamber tops: Material

**Steel**

Tensile strength

**28-32 tons**

Depth and thickness of girder

at centre

**7 x 1 1/4"**

Length as per Rule

**28 1/4"**

Distance apart

**8 5/8"**

No. and pitch of stays

in each

**welded as per plan**

Working pressure by Rules

**155 lbs**

Combustion chamber plates: Material

**Steel**

Tensile strength

**26-30 tons**

Thickness: Sides

**29/32**

Back

**29/32**

Top

**29/32**

Bottom

**29/32**

Pitch of stays to ditto: Sides

**10 x 8**

Back

**10 x 8**

Top

Are stays fitted with nuts or riveted over

**Riveted except margin which are nutted**

Working pressure by Rules

**148 lbs**

Front plate at bottom: Material

**Steel**

Tensile strength

**26-30 tons**

Thickness

**29/32**

Lower back plate: Material

**Steel**

Tensile strength

**26-30 tons**

Thickness

**29/32**

Pitch of stays at wide water space

**14" x 8"**

Are stays fitted with nuts or riveted over

**welded inside & outside with washer as per plan**

Working Pressure

**162 lbs**

Main stays: Material

**Steel**

Tensile strength

**28-32 tons**

Diameter

{ At body of stay, or Over threads **2 1/2"**

No. of threads per inch

**welded inside & outside with washer as per plan**

Area supported by each stay

**16 3/4" x 16 3/4"**

Working pressure by Rules

**193 lbs**

Screw stays: Material

**Steel**

Tensile strength

**26-30 tons**

Diameter

{ At turned off part, or Over threads **1 1/2"**

No. of threads per inch

**9**

Area supported by each stay

**10 x 8**



Lloyd's Register Foundation

5-A 73609.

Working pressure by Rules 156 lbs Are the stays drilled at the outer ends no Margin stays: Diameter <sup>At turned off part,</sup> 1 1/8" <sup>or</sup> 1 1/8" <sup>Over threads</sup> ✓  
 No. of threads per inch 9 Area supported by each stay 12 x 8" Working pressure by Rules 158 lbs ✓  
 Tubes: Material Steel External diameter <sup>Plain</sup> 3" <sup>Stay</sup> 3" Thickness 9/16" <sup>5/16"</sup> No. of threads per inch 9 ✓  
 Pitch of tubes 12 9/16 x 8 3/8" <sup>4 3/16 x 4 3/16"</sup> Working pressure by Rules 236 lbs ✓ Manhole compensation: Size of opening in shell plate 19 3/4 x 15 3/4" Section of compensating ring 19 1/2 x 29 1/32" No. of rivets and diameter of rivet holes 44 @ 1 1/8" ✓  
 Outer row rivet pitch at ends 7 1/4" Depth of flange if manhole flanged 3 5/16" ✓ Steam Dome: Material \_\_\_\_\_  
 Tensile strength \_\_\_\_\_ Thickness of shell \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_  
 Diameter of rivet holes \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Percentage of strength of joint <sup>Plate</sup> \_\_\_\_\_ <sup>Rivets</sup> \_\_\_\_\_  
 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 \_\_\_\_\_ Manufacturers of <sup>Tubes</sup> \_\_\_\_\_ <sup>Steel forgings</sup> \_\_\_\_\_ <sup>Steel castings</sup> \_\_\_\_\_  
 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 \_\_\_\_\_ 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 \_\_\_\_\_ forgings and 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 \_\_\_\_\_

The foregoing is a correct description,  
 A. Macneil, Manufacturer.

Dates of Survey <sup>During progress of work in shops - - -</sup> Oct 28. 6.10. Dec 24. Jan 4. 9. 11. 17. 19. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) \_\_\_\_\_  
<sup>while building</sup> <sup>During erection on board vessel - - -</sup> \_\_\_\_\_ 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.)  
These boilers have been constructed under Special Survey, in accordance with the Society's Rules and the approved plans. Materials and workmanship are good.

The Boilers have been despatched to Gothenburg for installation in the vessel.

Survey Fee ... .. £ 53 : 4 : - } When applied for, 19 \_\_\_\_\_  
 Travelling Expenses (if any) £ : : } When received, 19 \_\_\_\_\_

8 FEB 1949

A. Macneil  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 8 - FEB 1949

TUES. 20 DEC 1949

Assigned Deferred for completion.

In witness

