

# REPORT ON BOILERS.

No. 19561

Received at London Office

11 OCT 1930

Date of writing Report 4<sup>th</sup> Oct. 1930 When handed in at Local Office

Port of HAMBURG

No. in Survey held at

HAMBURG

Date, First Survey

10<sup>th</sup> MARCH

Last Survey 29<sup>th</sup> SEPT. 1930

Book.

on the

Steel Twin Sc.

SEVERBORG

Number of Visits 28

Gross Tons Net

Master

Built at

HAMBURG

By whom built

BLONN & VOSE

Yard No.

489

When built

1930

Engines made at

GOthenBURG

By whom made

MILLER GÖTAVERKEN

Engine No.

When made

Boilers made at

HAMBURG

By whom made

BLONN & VOSE

Boiler No.

1281

When made

1930

nominal Horse Power

Owners STOCKHOLMS A/P SEVEN.

Port belonging to

STOCKHOLM

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel *Mannesmann-Röhren-Werke AG, Schiedershausen - Saarbrücken* (Letter for Record *S.*)  
*Queshoffnungsbau AG - Oberhausen.*

Total Heating Surface of Boilers *2 x 120 sqm.* Is forced draught fitted *yes* Coal or Oil fired *oil.*

No. and Description of Boilers *2 - Single end multitubular Donkey Boilers* Working Pressure *12.5 kg/cm<sup>2</sup> (150 lb)*

Tested by hydraulic pressure to *277 lb* Date of test *1.8.30* No. of Certificate *514-515* Can each boiler be worked separately *yes*

Area of Firegrate in each Boiler *—* No. and Description of safety valves to each boiler *2 spring loaded*

Area of each set of valves per boiler *per Rule 7648 kg/cm<sup>2</sup>* Pressure to which they are adjusted *12.5 kg/cm<sup>2</sup>* 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 *690 mm.* 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 *3530 mm.* Length *3310 mm.* Shell plates: Material *S.Y. Steel* Tensile strength *44-50 kg/cm<sup>2</sup>*

Thickness *23 mm.* Are the shell plates welded or flanged *flanged* Description of riveting: circ. seams *end ls. double*

Long. seams *Double full. double.* Diameter of rivet holes in *circ. seams 29 mm.* Pitch of rivets *100 mm.*

Percentage of strength of circ. end seams *plate 71%, rivets 47%* Percentage of strength of circ. intermediate seam *plate 80%, rivets 91.2%*

Percentage of strength of longitudinal joint *plate 80%, rivets 91.2%, combined 94%* Working pressure of shell by Rules *11.66 kg/cm<sup>2</sup>*

Thickness of butt straps *inter 20 mm., inner 23 mm.* No. and Description of Furnaces in each Boiler *2 - Morrison.*

Material *S.Y. Steel* Tensile strength *41-47 kg/cm<sup>2</sup>* Smallest outside diameter *1060 mm.*

Length of plain part *top 20 mm., bottom 23 mm.* Thickness of plates *15 mm.* Description of longitudinal joint *welded.*

Dimensions of stiffening rings on furnace or c.e. bottom *—* Working pressure of furnace by Rules *12.55 kg/cm<sup>2</sup>*

Stays in steam space: Material *S.Y. Steel* Tensile strength *41-47 kg/cm<sup>2</sup>* Thickness *23 mm.* Pitch of stays *420 x 420 mm.*

Are stays secured *Double nut. riveted outside washers* Working pressure by Rules *14.3 kg/cm<sup>2</sup>*

Stays plates: Material *front S.Y. Steel.* Tensile strength *41-47 kg/cm<sup>2</sup>* Thickness *23 mm.*

Pitch of stay tubes in nests *192 x 192 mm.* Pitch across wide water spaces *370 mm.* Working pressure *front 10.6 kg/cm<sup>2</sup>, back 12.7 kg/cm<sup>2</sup>*

Orders to combustion chamber tops: Material *S.Y. Steel* Tensile strength *41-47 kg/cm<sup>2</sup>* Depth and thickness of girder *—*

Centre *180 mm - 2 x 15 mm.* Length as per Rule *700 mm.* Distance apart *220 mm.* No. and pitch of stays *—*

Each *2 - 200 mm.* Working pressure by Rules *10.55 kg/cm<sup>2</sup>* Combustion chamber plates: Material *S.Y. Steel.*

Tensile strength *41-47 kg/cm<sup>2</sup>* Thickness: Sides *17 mm.* Back *17 mm.* Top *17 mm.* Bottom *22 mm.*

Pitch of stays to ditto: Sides *205 x 200 mm.* Back *205 x 220 mm.* Top *200 x 220 mm.* Are stays fitted with nuts or riveted over *yes: riveted over.*

Working pressure by Rules *10.5 kg/cm<sup>2</sup>* Front plate at bottom: Material *S.Y. Steel.* Tensile strength *41-47 kg/cm<sup>2</sup>*

Thickness *23 mm.* Lower back plate: Material *S.Y. Steel.* Tensile strength *41-47 kg/cm<sup>2</sup>* Thickness *23 mm.*

Pitch of stays at wide water space *circle diam. 420 mm.* Are stays fitted with nuts or riveted over *Double nut.*

Working Pressure *14.3 kg/cm<sup>2</sup>* Main stays: Material *S.Y. Steel.* Tensile strength *44-51 kg/cm<sup>2</sup>*

At body of stay *64 mm.* No. of threads per inch *6* Area supported by each stay *420 x 420 mm.*

Over threads *front 72 mm. back 64 mm.* Screw stays: Material *S.Y. Steel.* Tensile strength *41-47 kg/cm<sup>2</sup>*

Working pressure by Rules *11.66 kg/cm<sup>2</sup>* At turned off part *32 mm.* No. of threads per inch *9.* Area supported by each stay *205 x 220 mm.*

Over threads *39 mm.*

Working pressure by Rules  $12.3 \text{ kg/cm}^2$  Are the stays drilled at the outer ends ☒ Margin stays: Diameter  $39 \text{ mm}$  or  $45 \text{ mm}$  ✓  
No. of threads per inch  $9$  Area supported by each stay  $205 \times 220 \text{ mm}$  Working pressure by Rules  $18.75 \text{ kg/cm}^2$   
Tubes: Material *iron* External diameter  $70 \text{ mm}$  Thickness  $7-8.5 \text{ mm}$  No. of threads per inch  $9$   
Pitch of tubes  $96 \times 96 \text{ mm}$  Working pressure by Rules  $19.5 \text{ kg/cm}^2$  Manhole compensation: Size of opening  
shell plate  $420 \times 520 \text{ mm}$  Section of compensating ring  $800 \times 800 \times 24 \text{ mm}$  No. of rivets and diameter of rivet holes  $44 - 29 \text{ mm}$   
Outer row rivet pitch at ends  $117 \text{ mm}$  Depth of flange if manhole flanged  $88 \text{ mm}$  Steam Dome: Material  
Tensile strength Thickness of shell Description of longitudinal joint  
Diameter of rivet holes Pitch of rivets Percentage of strength of joint  
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  
Number of elements Material of tubes Manufacturers of Tubes  
Material of headers Tensile strength Steel castings  
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  
Rules Pressure to which the safety valves are adjusted Hydraulic test pressure  
tubes castings and after assembly in place Are drain cocks or valves  
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, *BLOHM & VOSS*  
*Fahrer*

Dates of Survey: During progress of work in shops -  $2/3-17/3-25/3-31/3-7/4-14-25/4-30/4$   
while building: During erection on board vessel -  $2/5-24/5-24/5-25/5-30/5-2/6-20/6$   
 $25/6-24/7-24/7-24/7-29/7-1/8/80$   
 $2/9-11/9-13/9-18/9-27/9-29/9/20$  Total No. of visits  $28$   
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) *Yes*

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

Material and workmanship of these Donkey Boilers are of good quality. The materials used in the construction are made at works recognized by the Committee and by the Society's Surveyors in accordance with the requirements of the Rules. These Donkey Boilers having been constructed under Special Survey in accordance with the approved plan the Secretary's Letter and other requirements in conformity with the requirements of the Rules are eligible in my opinion to be classed in the Society's Reg. No. with record 150.

Thickness of plates:  $25 \text{ mm}$  Port:  $25.5 \text{ mm}$

Stl. 2 Boilers Stl:  $25 \text{ mm}$  Port:  $25.5 \text{ mm}$   
Port:  $27 \text{ mm}$   $28 \text{ mm}$

Survey Fee  $\pounds 74.40$   
Travelling Expenses (if any)  $\pounds 1.76$

When applied for, 192  
When received, 20/2/192

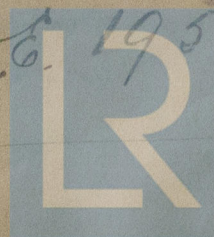
*Friedrich J. H.*  
TUE. 30 JUN 192

Committee's Minute

FRI. 13 MAR 192

Assigned

See other Ham 26. 1956



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