

REPORT ON BOILERS.

No. 12106

NOV 25 1938

Received at London Office

Writing Report 18th November 1938 When handed in at Local Office 23rd November 1938 Port of **GOTHENBURG**

Survey held at **GOTHENBURG** Date, First Survey 9th February Last Survey 15th November 1938

on the **M/S "GARD"** (Number of Visits 19) Gross 8259.29 Tons Net 4958.56

Built at **GOTHENBURG** By whom built **ERIKSBERGS M.V. AB** Yard No. 283 When built 1938

made at **GOTHENBURG** By whom made **ERIKSBERGS M.V. AB.** Engine No. 205 When made 1938

made at **GOTHENBURG** By whom made **ERIKSBERGS M.V. AB.** Boiler No. 578 When made 1938

Horse Power 644 Owners **SKIBS A/S CORONA** Port belonging to **HAUGESUND**

TUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Furnaces: Messrs Deutsche Rohrenwerke A.G. Mülheim, Ruhr.
Plates: Messrs. Ruhrstahl A.G., Gladungen

Working Surface of Boilers 2x130 = 260 m² Is forced draught fitted **Yes** Coal or Oil fired **Oil fired** Working Pressure 142 lbs/sq. in.

Description of Boilers **Two cylindrical, multitubular** Can each boiler be worked separately **Yes**

hydraulic pressure to 265 lbs/sq. in. Date of test 21.5.38. No. of Certificate 304-305

Regulate in each Boiler **Double spring loaded.** No. and Description of safety valves to each boiler **Double spring loaded.** Are they fitted with easing gear **Yes**

each set of valves per boiler **67.5 mm.** Pressure to which they are adjusted **142 lbs/sq. in.** Are they fitted with easing gear **Yes**

donkey boilers, state whether steam from main boilers can enter the donkey boiler **No main boilers fitted.**

distance between boilers or uptakes and bunkers or woodwork **900 mm** Is oil fuel carried in the double bottom under boilers **No**

distance between shell of boiler and tank top plating **Is the bottom of the boiler insulated** **Yes**

Internal dia. of boilers **3352 mm** Length **3350 mm** Shell plates: Material **1M-steel** Tensile strength **44.2-50.0 kg/mm²**

Are the shell plates welded or flanged **No** Description of riveting: circ. seams **Double riv. lap** inner **none**

Diameter of rivet holes in **circ. seams 26.5 mm** Pitch of rivets **79 mm** **145 mm.**

of strength of circ. end seams **plate 66.5** Percentage of strength of circ. intermediate seam **plate 83.5** **rivets 100**

of strength of longitudinal joint **plate 83.5** Working pressure of shell by Rules **10 kg/cm²**

of butt straps **outer 14.5 mm** No. and Description of Furnaces in each Boiler **Two, Morison**

1M-steel Tensile strength **42.4-46.3 kg/mm²** Smallest outside diameter **920 mm**

Thickness of plates **10 mm** Description of longitudinal joint **Lap welded.**

of stiffening rings on furnace or c.c. bottom **Working pressure of furnace by Rules 10.8 kg/cm²**

in steam space: Material **1M-steel** Tensile strength **46.7-47.1 kg/mm²** Thickness **20 mm** Pitch of stays **405 x 350 mm**

Working pressure by Rules **10.4 kg/cm²**

Material **1M-steel** Tensile strength **47 kg/cm²** Thickness **21 mm.**

Material **1M-steel** Tensile strength **47 kg/cm²** Thickness **21 mm.**

of stay tubes in nests **276 mm.** Pitch across wide water spaces **330 mm.** Working pressure **front 13.2 kg/cm²** **back 14.5 kg/cm²**

combustion chamber tops: Material **1M-steel** Tensile strength **45.4 kg/cm²** Depth and thickness of girder

Length as per Rule **735 mm.** Distance apart **205 mm.** No. and pitch of stays

Working pressure by Rules **11 kg/cm²** Combustion chamber plates: Material **1M-steel**

Thickness: Sides **16 mm.** Back **18 mm** Top **16 mm.** Bottom **16 mm.**

Are stays fitted with nuts or riveted over **As per plan**

Front plate at bottom: Material **1M-steel** Tensile strength **46.2-47.0 kg/mm²**

Lower back plate: Material **1M-steel** Tensile strength **46.2-47.0 kg/mm²** Thickness **20 mm.**

Are stays fitted with nuts or riveted over **Fitted with nuts**

Main stays: Material **1M-steel** Tensile strength **As per Rule**

No. of threads per inch **6** Area supported by each stay **142000 mm²**

Screw stays: Material **1M-steel** Tensile strength **As per Rule**

No. of threads per inch **9** Area supported by each stay **54200 mm²**

Working pressure by Rules 10.4 kg/cm^2 Are the stays drilled at the outer ends No Margin stays: Diameter $\begin{cases} \text{At turned off part} \\ \text{or} \\ \text{Over threads} \end{cases} \begin{cases} 15/8'' \\ 15/8'' \end{cases}$
No. of threads per inch 9 Area supported by each stay 58300 mm^2 Working pressure by Rules 11.8 kg/cm^2
Tubes: Material Steel External diameter $\begin{cases} \text{Plain} \\ \text{Stay} \end{cases} \begin{cases} 2\frac{1}{2}'' \\ 2\frac{1}{2}'' \end{cases}$ Thickness $\begin{cases} \text{LSG No 10} \\ \text{LSG No 1} \end{cases}$ No. of threads per inch 9
Pitch of tubes $95 \times 89 \text{ mm}$ Working pressure by Rules 12.3 kg/cm^2 Manhole compensation: Size of 40 - 1 1/16''
shell plate $420 \times 520 \text{ mm}$ Section of compensating ring $275 \times 25 \text{ mm}$ No. of rivets and diameter of rivet holes
Outer row rivet pitch at ends 175 mm Depth of flange if manhole flanged 75 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 $\begin{cases} \text{Plate} \\ \text{Rivets} \end{cases}$
Internal diameter Working pressure by Rules Thickness of crown No. and
stays Inner radius of crown Working pressure by Rules
How connected to shell Size of doubling plate under dome Diameter of rivet holes
of rivets in outer row in dome connection to shell

Type of Superheater No superheater fitted Manufacturers of $\begin{cases} \text{Tubes} \\ \text{Steel forgings} \\ \text{Steel castings} \end{cases}$
Number of elements Material of tubes Internal diameter and thickness of tubes
Material of headers Tensile strength Thickness Can the superheater be sh
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 press
Rules Pressure to which the safety valves are adjusted Hydraulic test
tubes forgings and castings and after assembly in place Are dra
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,
Eriksbergs Mek. Verkstads Aktiebolag

Dates of Survey $\begin{cases} \text{During progress of} \\ \text{work in shops} \end{cases} \begin{cases} 1938 \text{ Feb. 9. 14. 22.} \\ \text{March 10. April 19. 27.} \\ \text{May 4. 18. 19. 21. Aug. 11. 29. Sept. 1. 2.} \end{cases}$
while building $\begin{cases} \text{During erection on} \\ \text{board vessel} \end{cases} \begin{cases} 1938 \text{ Oct. 8. 19. 22. Nov. 11. 15.} \end{cases}$

Are the approved plans of boiler and superheater forwarded herewith No
(If not state date of approval.)
Total No. of visits 19

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. ms Solör, Got. report no 11

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

These donkeyboilers have been built under special survey in accordance with
approved plan and the Society's Rules.

The workmanship is good.

Test sheets of the material are attached.

The boilers are marked as below:

No 304 - 305
LLOYD'S TEST 18.6 Kg
WP 10 Kg
R 21.5.38 SR

Survey Fee 354.00 When applied for 23 Nov. 1938
Travelling Expenses (if any) £ : : When received, 12/12 1938

F. Aspelin
Engineer Surveyor to Lloyd's Register of S

Committee's Minute TUE 29 NOV 1938
Assigned See FE machy H.



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Lloyd's Register
Foundation