

# REPORT ON BOILERS.

No. 24096

Received at London Office.

Date of writing Report 12/2 19 58 When handed in at Local Office 6/5 19 58. Port of GOTHENBURG.

ing in No. in eg. Book Survey held at Gävsjö Date, First Survey 5/4 -57. Last Survey 20/12 19 57.

(Number of Visits 3) (Gross abt. 800 Tons Net. ---)

on the "P A M I R"

uilt at Gävle By whom built A/B Gävle Varv Yard No. 99 When built 1958.

Engines made at Augsburg By whom made Maschinenfabrik Augsburg-Nürnberg A.G. Engine No. --- When made. ---

Boilers made at Gävsjö By whom made A-B. Vatten och Ånga Boiler No. 25305 When made 1957.

l pitch as per Rule Owners U. S. S. R. Port belonging to Leningrad

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Domnarfvets Jernverk, AB Storfors Rörverk.

total Heating Surface of Boilers 26 m<sup>2</sup> Of Superheaters ---

total for Register Book 26 m<sup>2</sup> Is forced draught fitted Yes Coal or Oil fired Oil

No. and Description of Boilers One single ended multitubular "Univer" Working Pressure 85 lbs/sq. inch

tested by hydraulic pressure to 178 lbs. Date of test 20/12 -57 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 double spring loaded 2 x 56 mm.

Area of each set of valves per boiler { per Rule 2240 mm<sup>2</sup> as fitted 4930 mm<sup>2</sup> 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 boilers or uptakes and bunkers or woodwork --- Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 1280 mm. Length 1400 mm. Shell plates: Material S.M. Steel Tensile strength 43.1-45.9 kg/mm<sup>2</sup>

fusion welded, state name of welding Firm A-B. Vatten och Ånga Have all the requirements of the Rules for Class I vessels

Complied with Yes Thickness 10 mm. Are the shell plates welded or flanged Welded Description of riveting: circ. seams { end --- inter ---

g. seams --- Diameter of rivet holes in { circ. seams --- long. 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 --- combined ---

Thickness of butt straps { outer --- inner --- No. and Description of Furnaces in each Boiler One cylindrical

Material S.M. Steel Tensile strength 43.1 - 45.9 kg/mm<sup>2</sup> Smallest outside diameter 440 mm.

Length of plain part { top 1400 mm. bottom --- Thickness of plates 10 mm. Description of longitudinal joint Electrically welded

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

End plates in steam space: Material S.M. Steel Tensile strength 43.1-45.9 kg/mm<sup>2</sup> Thickness 10 mm. Pitch of stays 250 mm.

How are stays secured Welded in doubling and end plate.

End plates: Material { front S.M. Steel Tensile strength 43.1 - 45.9 kg/mm<sup>2</sup> Thickness 10 mm. back S.M. Steel Tensile strength 43.1 - 45.9 kg/mm<sup>2</sup> Thickness 10 mm.

Pitch of stay tubes in nests --- Pitch across wide water spaces ---

Ends to combustion chamber tops: Material Tensile strength Depth and thickness of girder

Centre Length as per Rule Distance apart No. and pitch of stays

Combustion chamber plates: Material

Tensile strength Thickness: Sides Back Top Bottom

End of stays to ditto: Sides Back Top Are stays fitted with nuts or riveted over

End plate at bottom: Material S.M. Steel Tensile strength 43.1 - 45.9 kg/mm<sup>2</sup>

Thickness 10 mm. Lower back plate: Material S.M. Steel Tensile strength 43.1 - 45.9 kg/mm<sup>2</sup> Thickness 10 mm.

End of stays at wide water space --- Are stays fitted with nuts or riveted over ---

End stays: Material S.M. Steel Tensile strength 54.6 - 55.1 kg/mm<sup>2</sup>

At body of stay 50 mm. No. of threads per inch ---

Over threads ---

At turned off part --- Tensile strength ---

Over threads --- No. of threads per inch ---



Are the stays drilled at the outer ends \_\_\_\_\_ Margin stays: Diameter { At turned off part, \_\_\_\_\_  
or  
Over threads, \_\_\_\_\_  
No. of threads per inch \_\_\_\_\_  
Tubes: Material S.M. Steel External diameter { Plain 60 mm. Thickness 4 mm. No. of threads per inch E.W.  
Stay \_\_\_\_\_  
Pitch of tubes 65 x 75 mm. Manhole compensation: Size of opening in  
shell plate 450 x 550 mm. Section of compensating ring 4920 mm<sup>2</sup> No. of rivets and diameter of rivet holes E.W.  
Outer row rivet pitch at ends --- Depth of flange if manhole flanged --- Steam Dome: Material S.M. Material  
Tensile strength 43.1 - 45.9 kg/mm<sup>2</sup> Thickness of shell 10 mm. Description of longitudinal joint Electrically welded  
Diameter of rivet holes --- Pitch of rivets --- Percentage of strength of joint { Plate ---  
Rivets ---  
Internal diameter 480 mm. Thickness of crown 15 mm. No. and diameter of  
stays --- Inner radius of crown ---  
How connected to shell Electrically welded 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 { Tubes \_\_\_\_\_  
Steel forgings \_\_\_\_\_  
Steel castings \_\_\_\_\_  
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 \_\_\_\_\_  
Pressure to which the safety valves are adjusted \_\_\_\_\_ Hydraulic test pressure \_\_\_\_\_  
tubes \_\_\_\_\_ forgings and castings \_\_\_\_\_ and after assembly in place \_\_\_\_\_ Are drain cocks \_\_\_\_\_  
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,  
AKTIEBOLAGET VALIEN OCH ANGA  
Karl Gustaf Rydberg  
Manufacture  
London  
29.6.57.

Dates of Survey { During progress of 5/4 -57 - 20/12 -57 Are the approved plans of boiler and superheater forwarded herewith 29.6.57.  
while work in shops - - -  
building { During erection on board vessel - - - Total No. of visits 3.

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.) This Donkey Boiler has been built under Special  
Survey in accordance with the Rules for Welded Pressure Vessels Class I. The workmanship is good. All welded parts of the  
boiler have been stress-relieved in accordance with the Rules. The material fulfils the requirements of the Rules. Test  
sheets of the materials are attached. Routine tests of the welding have been carried out with satisfactory results. Plans  
showing position and number of X-ray films and a table on which is indicated the category in which each film was placed  
by Tekniska Röntgencentralen are attached.

The boiler has been marked:-

Nr. 790
Lloyd's test 178 lbs.
WP 85 lbs.
GU 20.12.57.

Survey Fee ... .. Kr. 250:- : } When applied for, 5/5 19.58  
Travelling Expenses (if any) Kr. 225:- : } When received --- 19.---

Engineer Surveyor to Lloyd's Register of Shipping.

FRIDAY 10 APR 1959

Committee's Minute

Assigned

See Rpt. 1.



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