

# REPORT ON BOILERS.

19 JAN 1956

Received at London Office

Date of writing Report 9th Jan. 1956 When handed in at Local Office 16th Jan. 1956 Port of Gothenburg

No. in Reg. Book. Survey held at Gothenburg Date, First Survey 6th October, 1955 Last Survey 20th December, 1955

on the Order No. 141 P 23 (Number of Visits 20) Tons {Gross... Net...}

Built at Stockholm By whom built AB Finnroda Varv Yard No. 365 When built 1956

Engines made at --- By whom made --- Engine No. --- When made ---

Boilers made at Gothenburg By whom made AB Lindholmens Varv Boiler No. 3133 When made 1955

MN as per Rule 213 Owners U. S. S. R. Port belonging to ---

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

Manufacturers of Steel Degerfors Jernverks AB., Mannesmann, Stewart & Lloyds, AB Motala Verkstad

Total Heating Surface of Boilers 2605 sq. feet Of Superheaters 1227 sq. feet

Total for Register Book 3832 sq. feet Is forced draught fitted Yes Coal or Oil fired coal

No. and Description of Boilers One scotch single ended Working Pressure 220 lbs/sq. inch

Tested by hydraulic pressure to 380 lbs/sq. inch Date of test 20.12.55. No. of Certificate 733 Can each boiler be worked separately ---

Area of Firegrate in each Boiler 73 sq. feet No. and Description of safety valves to each boiler One double springloaded

Area of each set of valves per boiler {per Ruls. 9200 mm² as fitted 11320 mm² 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 ---

Largest internal dia. of boilers 4569 mm Length 3650 mm Shell plates: Material SM-steel Tensile strength 44-50 kg/mm²

If fusion welded, state name of welding Firm AB Lindholmens Varv, Gothenburg Have all the requirements of the Rules for Class I vessels

been complied with Yes Thickness 40.5 mm Are the shell plates welded ~~expansive~~ Yes Description of riveting: circ. seams {end E.W. inter E.W.}

long. seams E.W. 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 3 Morison corrugated

Material SM - steel Tensile strength 41-47 kg/mm² Smallest outside diameter 1135 mm

Length of plain part {top 235 mm bottom 235 mm} Thickness of plates 17.5 mm Description of longitudinal joint E.W.

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

End plates in steam space: Material SM - steel Tensile strength 41-47 kg/mm² Thickness 28 mm Pitch of stays 440x520 mm

How are stays secured E.W. with outside washers

Tube plates: Material {front SM - steel back SM - steel} Tensile strength {41-47 kg/mm² 41-47 kg/mm²} Thickness {28 mm 22 mm}

Mean pitch of stay tubes in nests 280 mm Pitch across wide water spaces 370 mm

Girders to combustion chamber tops: Material SM - steel Tensile strength 44 - 50 kg/mm² Depth and thickness of girder

at centre 220 x 40.5 mm Length as per Rule 824 mm Distance apart 205 mm No. and pitch of stays

in each cont. E.W. Combustion chamber plates: Material SM - steel

Tensile strength 41 - 47 kg/mm² Thickness: Sides 19 mm Back 18 mm Top 19 mm Bottom 21 mm

Pitch of stays to ditto: Sides 220x230 mm Back 210x210 mm Top 205xcont. E.W. Are stays fitted with nuts or riveted over E.W.

Front plate at bottom: Material SM - steel Tensile strength 41 - 47 kg/mm²

Thickness 28 mm Lower back plate: Material SM - steel Tensile strength 41 - 47 kg/mm² Thickness 28 mm

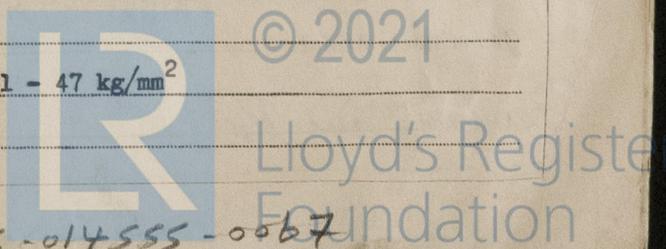
Pitch of stays at wide water space 370 x 210 mm Are stays fitted with nuts or riveted over E.W.

Main stays: Material SM - steel Tensile strength 44 - 50 kg/mm²

Diameter {XXXXXXX} 76 mm No. of threads per inch E.W.

Screw stays: Material SM - steel Tensile strength 41 - 47 kg/mm²

Diameter {XXXXXXX} 40 mm No. of threads per inch E.W.



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Are the stays drilled at the outer ends No Margin stays: Diameter ~~XXXXXXXXXX~~ 47 mm  
 No. of threads per inch E.W.  
 Tubes: Material SM - steel External diameter { Plain 83 mm Stay 83 mm Thickness { 4 mm 8 mm No. of threads per inch 9  
 Pitch of tubes 114 x 110 mm Manhole compensation: Size of opening in shell plate 401 x 501 mm Section of compensating ring 40.5x173 mm 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 ---  
 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 --- Thickness of crown --- No. and diameter of stays ---  
 Inner radius of crown ---  
 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 Smith's type Manufacturers of { Tubes Stewart & Lloyds Steel forgings Degerfors Jernverks AB.  
 Number of elements 57 Material of tubes SM - steel Internal diameter and thickness of tubes 19 x 3 mm  
 Material of headers SM - steel Tensile strength 41-47 kg/mm<sup>2</sup> Thickness 15 mm 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 50 kg/cm<sup>2</sup> forgings and castings 50 kg/cm<sup>2</sup> and after assembly in place --- Are drain cocks or valves fitted to free the superheater from water where necessary Yes  
 Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes

The foregoing is a correct description,  
**AKTIEBOLAGET LINDHOLMENS VARV**  
**ÅNGPANNEAVDELNINGEN** Manufacturer.  
*Sten Johnson*

Dates of Survey { During progress of work in shops 6.10.55. - 20.12.55. Are the approved plans of boiler and superheater forwarded herewith 9.7.54. (If not state date of approval.)  
 while building { During erection on board vessel --- Total No. of visits 20

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. Gävle Varv Nos. 85,86,87,88,89,90,91 Ekensberg Nos. 206,207, Lindholmen Nos. 1044,1045.

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) This boiler has been built under Special Survey in accordance with the Rules for Welded Pressure Vessels Class I and the approved plan. 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. The Manufactures have 29 boilers of this type on order and the material certificates will be forwarded when the order has been finished. Routine tests of welding have been carried out with satisfactory results. A plan showing the position and number of x-ray films and on which it is indicated the category in each film was placed by which/ Tekniska Röntgencentralen is attached. The boiler has been marked:-

No. 733 Got.  
 Lloyd's Test 380 lbs/sq.inch  
 WP 220 lbs/sq.inch  
 SJ 20.12.55.  
 L.V. No.3133

Survey Fee ... .. Kr. : 860:00 } When applied for 16th Jan., 1956.  
 Travelling Expenses (if any) £ --- : --- : --- } When received -----19----

*Sten Johnson*  
 Engineer Surveyor to Lloyd's Register of Shipping.

FRIDAY - 1 MAR 1957

Committee's Minute ---  
 Assigned See Rpt. 1.

