

REPORT ON BOILERS.

No. 21901.

Received at London Office.....

Date of writing Report 17th Oct. 1955 When handed in at Local Office 20th Oct. 1955 Port of Gothenburg

No. in Reg. Book. Survey held at Gothenburg Date, First Survey 5th August, Last Survey 6th October, 1955

on the Order 141 P 20 for Gävle Varv "LAGIL" (Number of Visits 18) Tons {Gross..... Net.....

Built at Gävle By whom built A.-B. Gävle Varv Yard No. 91 When built

Engines made at By whom made Engine No. When made

Boilers made at Gothenburg By whom made A.-B. Lindholmens Varv Boiler No. 3110 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 A.-B. Domnarvets Järnverk, John Marshall, A.-B. Storfors Rörverk, A.-B. Motala Verkstad, Avesta Järnverks A.-B.

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

Total for Register Book 3832 sq.ft. 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 6.10.1955 No. of Certificate 730 Can each boiler be worked separately

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

Area of each set of valves per boiler {per Rule 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 S.M. Steel Tensile strength 44 - 50 kg/mm²

If fusion welded, state name of welding Firm A.-B. 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 in zigzag Yes Description of riveting: circ. seams Electrically welded

long. seams Electrically welded 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 S.M. 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 Electrically welded

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

End plates in steam space: Material S.M. Steel Tensile strength 41 - 47 kg/mm² Thickness 28 mm. Pitch of stays 440 x 520 mm.

How are stays secured Electrically welded with outside washers

Tube plates: Material {front S.M. Steel Tensile strength 41 - 47 kg/mm² Thickness 28 mm. back S.M. Steel Tensile strength 41 - 47 kg/mm² Thickness 22 mm.

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

Girders to combustion chamber tops: Material S.M. 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. Electrically welded Combustion chamber plates: Material S.M. 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 220 x 230 mm. Back 210 x 210 mm. Top 205 x Cont. E.W. Are stays fitted with nuts or riveted over Electrically welded

Front plate at bottom: Material S.M. Steel Tensile strength 41 - 47 kg/mm²Thickness 28 mm. Lower back plate: Material S.M. 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 Electrically welded

Main stays: Material S.M. Steel Tensile strength 44 - 50 kg/mm²

Diameter 76 mm. No. of threads per inch Electrically welded

Screw stays: Material S.M. Steel Tensile strength 41 - 47 kg/mm²

Diameter 40 mm. No. of threads per inch Electrically welded

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Are the stays drilled at the outer ends No Margin stays: Diameter 47 mm.
No. of threads per inch Electrically welded
Tubes: Material S.M. Steel External diameter 83 mm. Thickness 4 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 40.5 x 173 mm. No. of rivets and diameter of rivet holes Electrically welded
Outer row rivet pitch at ends Depth of flange if manhole flanged Steam Dome: Material Electrically welded
Tensile strength Thickness of shell Description of longitudinal joint Plate
Diameter of rivet holes Pitch of rivets Percentage of strength of joint 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 A-B. Storfors Rörverk
Steel forgings Avesta Järnverks A.B.
Number of elements 57 Material of tubes S.M. Steel Internal diameter and thickness of tubes 19 x 3 mm.
Material of headers S.M. Steel Tensile strength 41 - 47 kg/mm² 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/cm² forgings and castings 50 kg/cm² 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
ÄNGRANNEÄNDELNINGEN Manufacturer.

Dates of Survey while building { During progress of work in shops - - } 5th August - 6th October, 1955 Are the approved plans of boiler and superheater forwarded herewith 9.7.1954.
(If not state date of approval.)
{ During erection on board vessel - - - } --- Total No. of visits 18

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. Gävle Varv No.85-90. Ekensbergs Varv 206-7
Lindholmens Varv No. 1044/45

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 Manufacturers 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 which each film was placed by Tekniska Röntgencentralen is attached. The boiler has been marked:-

No. 730 GOT.
Lloyd's test 380 lbs/sq.inch
WP 220 lbs/sq.inch
SJ 6.10.55.
LV No. 3110

Survey Fee £r. :860:00 } When applied for, 20/1019.55
Travelling Expenses (if any) £ :--- -- } When received19.---

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

Committee's Minute MONDAY 14 AUG 1956

Assigned See Skm 10608



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Foundation