

REPORT ON BOILERS.

Received at London Office

23 OCT 1939

Date of writing Report 27th Oct 1939 When handed in at Local Office 13th Oct 1939 Port of Göteborg

No. in Survey held at Göteborg Date, First Survey 6th April Last Survey 6th Oct 1939

Supplement 40954 on the Single screw M.S. SALAMIS (Number of Visits 18) Tons { Gross 8286.40 Net 4900.77

Master ✓ Built at Göteborg By whom built A.B. Götaverken Yard No. 535 When built 1939

Engines made at Göteborg By whom made do. Engine No. 1348 When made 1939

Boilers made at do. By whom made do. Boilers No 2070-1 When made 1939

Nominal Horse Power 653 Owners A.S. Salamis Port belonging to Oslø

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colville Ltd. (Letter for Record S)

Total Heating Surface of Boilers 2 x 130 m² Is forced draught fitted Yes Coal or Oil fired oil

No. and Description of Boilers 2 Scotch multitubular Working Pressure 10.55 kg/cm² (150 lb/in²) 150 lb.

Tested by hydraulic pressure to 19.4 kg/cm² Date of test 5-6-39 No. of Certificate 3189319 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler ✓ No. and Description of safety valves to each boiler 1 double spring loaded

Area of each set of valves per boiler { per Rule 6850 mm² as fitted 8830 mm² Pressure to which they are adjusted 150 lb/in² Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler no main boilers

Smallest distance between boilers or uptakes and bunkers 2 ft 6 in to A.P. tank Is oil fuel carried in the double bottom under boilers ✓

Smallest distance between shell of boiler and tank top plating Fitted on flat above throat Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 3556 mm. Length 3450 mm. Shell plates: Material S.M. Steel Tensile strength 44/50 kg/mm²

Thickness 20.5 mm. Are the shell plates welded or flanged no. Description of riveting: circ. seams { end D.R.L inter. ✓

long. seams D.B. strips. 4 Rows. Diameter of rivet holes in { circ. seams 27 mm. Pitch of rivets { 95 mm. long. seams 27 & 23 mm. 279 mm.

Percentage of strength of circ. end seams { plate 71.5 rivets 48 Percentage of strength of circ. intermediate seam { plate ✓ rivets ✓

Percentage of strength of longitudinal joint { plate 90.3 rivets 97.6 combined 91.7 Working pressure of shell by Rules 11 kg/cm²

Thickness of butt straps { outer 20.5 mm. inner 20.5 mm. No. and Description of Furnaces in each Boiler 2 Morrison corrugated

Material S.M. Steel Tensile strength 41/47 kg/mm² Smallest outside diameter 1124 mm.

Length of plain part { top 220 mm. bottom 220 mm. Thickness of plates { crown 12 mm. Description of longitudinal joint welded bottom ✓

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 10.76 kg/cm²

End plates in steam space: Material S.M. Steel Tensile strength 41/47 kg/mm² Thickness 21 mm. Pitch of stays 405 x 330

How are stays secured D.N. 9 loose washers outside Working pressure by Rules 11.95 kg/cm²

Tube plates: Material { front S.M. steel back S.M. steel Tensile strength { 41/47 kg/mm² Thickness { 21 mm. 18 mm.

Mean pitch of stay tubes in nests 242.5 mm Pitch across wide water spaces 350 mm. Working pressure { front 11.4 kg/cm² back 13.8 kg/cm²

Girders to combustion chamber tops: Material S.M. Steel Tensile strength 44/50 kg/mm² Depth and thickness of girder at centre 180, 2 x 20.5 mm Length as per Rule 762 mm. Distance apart 207 mm. No. and pitch of stays in each 2, 210 mm. Working pressure by Rules 13.5 kg/cm² Combustion chamber plates: Material S.M. Steel

Tensile strength 41/47 kg/mm² Thickness: Sides 18 mm. Back 18 mm. Top 18 mm. Bottom 18 mm.

Pitch of stays to ditto: Sides 210 x 210 mm. Back 209 x 215 mm. Top 207 x 210 mm. Are stays fitted with nuts or riveted over marginal with nuts. other riveted.

Working pressure by Rules 11.9 kg/cm² Front plate at bottom: Material S.M. Steel Tensile strength 41/47 kg/mm²

Thickness 21 mm. Lower back plate: Material S.M. Steel Tensile strength 41/47 kg/mm² Thickness 21 mm.

Pitch of stays at wide water space 320 x 209 mm. Are stays fitted with nuts or riveted over nuts

Working Pressure 16.55 kg/cm² Main stays: Material S.M. Steel Tensile strength 44/50 kg/mm²

Diameter { At body of stay, or 63.5 mm. No. of threads per inch 6 Area supported by each stay 405 x 330 mm. Over threads ✓

Working pressure by Rules 15.1 kg/cm² Screw stays: Material S.M. Steel Tensile strength 41/47 kg/mm²

Diameter { At turned off part, or 38 mm. No. of threads per inch 9 Area supported by each stay 209 x 215 mm. Over threads ✓

Working pressure by Rules 12.6 kg/cm^2 Are the stays drilled at the outer ends *no.* Margin stays: Diameter $\begin{cases} \text{At turned off part,} \\ \text{or} \\ \text{Over threads} \end{cases} 28 \text{ mm.}$

No. of threads per inch *9* Area supported by each stay $209 \times 252.5 \text{ mm.}$ Working pressure by Rules 10.7 kg/cm^2

Tubes: Material *S.M. Steel* External diameter $\begin{cases} \text{Plain} & 3'' \\ \text{Stay} & 3'' \end{cases}$ Thickness $\begin{cases} 9.256 \\ 5/16'' \end{cases}$ No. of threads per inch *9*

Pitch of tubes $102 \times 106 \text{ mm.}$ Working pressure by Rules 18 kg/cm^2 Manhole compensation: Size of opening in shell plate $400 \times 500 \text{ mm.}$ Section of compensating ring $700 \times 800 \times 20 \text{ mm.}$ No. of rivets and diameter of rivet holes $36, 27 \text{ mm.}$

Outer row rivet pitch at ends 130 mm. Depth of flange if manhole flanged $80 \text{ mm. in endplate}$ 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 diameter of stays

Inner radius of crown Working pressure by Rules

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 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 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 casing gear Working pressure as per Rules

Pressure to which the safety valves are adjusted Hydraulic test pressure: tubes forgings and castings and after assembly in place Are drain cocks or 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 GÖTAVÄRKEN Manufacturer.
W. W. L. L.

Dates of Survey $\begin{cases} \text{During progress of work in shops} & 1939 \text{ April } 6, 20, 24, 25, 31, \text{ June } 5 \\ \text{while building} & \text{During erection on board vessel} & \text{July } 19, 28, \text{ Aug. } 16, \text{ Sept } 25, \text{ Oct } 3, 6 \end{cases}$ Are the approved plans of boiler and superheater forwarded herewith *25-5-38* (If not state date of approval.)

Total No. of visits *18*

Is this Boiler a duplicate of a previous case *Yes* If so, state Vessel's name and Report No. *M.S. NIKE Got. Yard no. 534*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *These darky boilers have been built under special survey of tested material in accordance with the Rules & approved plans. The workmanship is good. The boilers have been securely fitted in the vessel under my supervision & to my satisfaction, and the safety valves adjusted under steam to 150 lb/in^2*

Survey Fee *£. 354.00* : : When applied for, *13/10 1939*

Travelling Expenses (if any) £ : : When received, *24/10/39*

W. W. L. L.
 Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 27 OCT 1939

Committee's Minute

Assigned *See for. J.E. 12615*

