

REPORT ON BOILERS.

No. 16516

Received at London Office

Writing Report 18/8/47 When handed in at Local Office 18/8/47 Port of GENOA

Survey held at GENOA Date, First Survey 31/3/47 Last Survey 7/5 1947

on the M/S. SERGIO LAGHI (Number of Visits) Gross 10495 Net 6182

Built at MONFALCONE By whom built CANTIERI RIUNITI DELL'ADRIATICO Yard No. 1257 When built 1942

Machinery made at TRIESTE By whom made CANTIERI RIUNITI DELL'ADRIATICO Engine No. 5357 When made 1942

Boilers made at TRIESTE By whom made CANTIERI RIUNITI DELL'ADRIATICO Boiler No. When made 1942

Original Horse Power Owners AZIENDA GENERALE ITALIANA PETROLI AGIP Port belonging to ROMA

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Alpine Montan Ges. & Nitroverkehr & Berg. (Letter for Record S. ✓)

Total Heating Surface of Boilers 251 m² Is forced draught fitted YES Coal or Oil fired OIL FIRED

Description of Boilers 2 CYLINDRICAL BOILER 3 FURNACES EACH Working Pressure 13 kg/cm²

Tested by hydraulic pressure to 250 kg Date of test No. of Certificate Can each boiler be worked separately YES ✓

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler TWO SPRINGS LOADED ✓

Pressure of each set of valves per boiler per Rule 10918 kg/cm² as fitted 11084 kg/cm² Pressure to which they are adjusted 13 kg/cm² Are they fitted with easing gear YES ✓

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 No ✓

Smallest distance between shell of boiler and tank top plating BOILERS FITTED ON TW. DK. Is the bottom of the boiler insulated YES ✓

Largest internal dia. of boilers 4380 mm Length 3736 mm Shell plates: Material S.M.S. ✓ Tensile strength 44-55 kg/cm²

Thickness 31 mm Are the shell plates welded or flanged NO Description of riveting: circ. seams end DOUBLE ZIG-ZAG. inter. NONE

g. seams DOUBLE BUT STRAP. Diameter of rivet holes in circ. seams φ = 35 mm. ✓ Pitch of rivets 106, 6 mm. ✓

Percentage of strength of circ. end seams plate 61.7% rivets 118.4% ✓ Percentage of strength of circ. intermediate seam plate rivets 83% ✓

Percentage of strength of longitudinal joint plate 83% rivets 104% ✓ Working pressure of shell by Rules 12.7 kg/cm²

Thickness of butt straps outer 24 mm. inner 27 mm. No. and Description of Furnaces in each Boiler NO 3 CORRUGATED FURNACE ✓

Material S.M.S. Tensile strength 41-47 kg/cm² Smallest outside diameter 1079 mm ✓

Length of plain part top 200 mm bottom 260 mm Thickness of plates crown 14.5 bottom 14.5 Description of longitudinal joint LAP WELDED ✓

Dimensions of stiffening rings on furnace or c.c. bottom NONE Working pressure of furnace by Rules 13.7 kg/cm²

Stays and plates in steam space: Material S.M.S. ✓ Tensile strength 44-55 kg/cm² Thickness 29 mm. ✓ Pitch of stays 420 x 440

How are stays secured SCREW DOWN & DOUBLE NUTS & flanging Working pressure by Rules 16.8 kg/cm²

Tube plates: Material front S.M.S. back S.M.S. ✓ Tensile strength 44-55 kg/cm² Thickness 20 mm. ✓

Pitch of stay tubes in nests 206 x 206 mm Pitch across wide water spaces 386 mm. Working pressure front 21 kg/cm² back 17 kg/cm²

Stays and plates to combustion chamber tops: Material S.M.S. ✓ Tensile strength 44-55 kg/cm² Depth and thickness of girder

centre 250 mm x 16 mm Length as per Rule Distance apart 200 mm. No. and pitch of stays

each 3 PITCH 217.7 Working pressure by Rules 15 kg/cm² Combustion chamber plates: Material S.M.S. ✓

Tensile strength 41-47 kg/cm² Thickness: Sides 19 mm. Back 19 mm. Top 19 mm. Bottom 22 mm. ✓

Pitch of stays to ditto: Sides 217.7 x 200 Back 213 x 193.5 Top 200 x 217.7 Are stays fitted with nuts or riveted over RIVETED OVER

Working pressure by Rules 16.8 kg/cm² Front plate at bottom: Material S.M.S. ✓ Tensile strength 44-55 kg/cm²

Thickness 23 mm. ✓ Lower back plate: Material S.M.S. ✓ Tensile strength 44-55 kg/cm² Thickness 25 mm. ✓

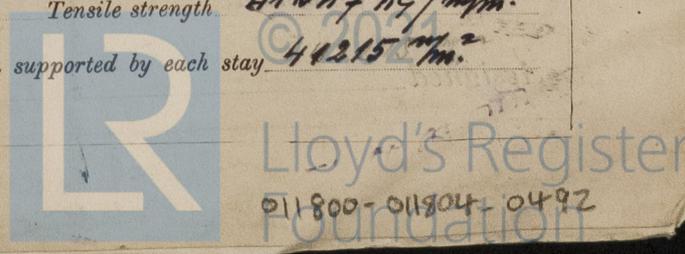
Pitch of stays at wide water space 200 x 217.7 mm. Are stays fitted with nuts or riveted over RIVETED OVER ✓

Working Pressure 17 kg/cm² Main stays: Material S.M.S. Tensile strength 44-55 kg/cm²

Diameter At body of stay, φ = 76 mm. ✓ No. of threads per inch 6 PER 1" Area supported by each stay 184800 mm²

Working pressure by Rules 15.0 kg/cm² Screw stays: Material S.M.S. Tensile strength 41-47 kg/cm²

Diameter At turned off part, φ = 38 mm. ✓ No. of threads per inch 9 PER 1" Area supported by each stay 41215 mm²



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Working pressure by Rules 13.9 kg/cm^2 Are the stays drilled at the outer ends No Margin stays: Diameter $\left\{ \begin{array}{l} \text{At turned off part, } 48 \text{ mm } \phi \\ \text{or} \\ \text{Over threads } \end{array} \right.$

No. of threads per inch 9 PER 1" Area supported by each stay 61.716 cm^2 Working pressure by Rules 15.9 kg/cm^2

Tubes: Material S. M. S. External diameter $\left\{ \begin{array}{l} \text{Plain } 76.19 \text{ mm} \\ \text{Stay } 76.19 \text{ mm} \end{array} \right.$ Thickness $\left\{ \begin{array}{l} 3.65 \text{ mm} \\ 3.65 \text{ mm} \end{array} \right.$ No. of threads per inch 9

Pitch of tubes 103 x 103 mm Working pressure by Rules 13.5 kg/cm^2 Manhole compensation: Size of opening shell plate 400 x 300 mm Section of compensating ring 240 x 31 mm - No. of rivets and diameter of rivet holes 36 RIVETS ϕ 33 mm

Outer row rivet pitch at ends 110 mm Depth of flange if manhole flanged 98 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 $\left\{ \begin{array}{l} \text{Plate } \\ \text{Rivets } \end{array} \right.$

Internal diameter _____ Working pressure by Rules _____ Thickness of crown _____ No. and diameter stays _____ Inner radius of crown _____ Working pressure by Rules _____

How connected to shell _____ Size of doubling plate under dome _____ Diameter of rivet holes and p of rivets in outer row in dome connection to shell _____

Type of Superheater _____ Manufacturers of $\left\{ \begin{array}{l} \text{Tubes } \\ \text{Steel forgings } \\ \text{Steel castings } \end{array} \right.$

Number of elements _____ Material of tubes _____ Internal diameter and thickness of tubes _____

Material of headers _____ Tensile strength _____ Thickness _____ Can the superheater be shut off of 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 pressure as Rules _____ 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

CANTIERI RIUNITI DELL'ADRIATICO
Fabbrica Macchine S. Andrea
The foregoing is a correct description,
Manufactur

Dates of Survey $\left\{ \begin{array}{l} \text{During progress of work in shops - -} \\ \text{while building } \left\{ \begin{array}{l} \text{During erection on board vessel - - -} \end{array} \right. \end{array} \right.$ Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
Total No. of visits _____

Is this Boiler a duplicate of a previous case _____ If so, state Vessel's name and Report No. _____

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This Boiler has been constructed under special survey of the Registro Italiano, Boilers examined internally and externally with mountings and safety valves, the mounting is found in accordance of the approved plans. The material was tested by the Registro Italiano and the workmanship are good. The Boiler has been tested by water to 150 lbs. and found in order. The oil fuel burning arrangements have been examined and tested in working condition and found satisfactory. The Boiler identification marks is follows:

STARBOARD:
CANT. RIUNITI DELL'ADRIATICO
F.M.S.A. - TRIESTE
 $\text{\textcircled{R}}$
Hgh. 10 cm^2 13 - N^o 1875
27.8.42

PORT:
CANT. RIUNITI DELL'ADRIATICO
F.M.S.A. - TRIESTE
 $\text{\textcircled{R}}$
Hgh. 10 cm^2 13 - N^o 1876
9.9.42.

Survey Fee £
Travelling Expenses (if any) £ SEE Rpt. 9 : } When applied for, 18/8/42 19
When received, 19

[Signature]
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 23 JAN 1949

Assigned For units see J.E. Rpt

