

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 7/5/47

1947

(Number of Visits)

Gross 10495
Net 6182

on the M/S. SERGIO LAGHI

Built at MONFALCONE

By whom built CANTIERI RIUNITI DELL'ADRIATICO

Yard No. 1257

When built 1942

Engines 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

Horse Power

Owners AZIENDA GENERALE ITALIANA PETROLI AGIP

Port belonging to

ROMA

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Alpine Montan Ges. & Nitroverkehrsges.

(Letter for Record S.)

Total Heating Surface of Boilers

251 m² / 2702

Is forced draught fitted

YES

Coal or Oil fired OIL FIRED

and 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

Area of each set of valves per boiler

per Rule 10918 m²
as fitted 11084 m²

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/mm²

Thickness

31 mm

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end DOUBLE ZIG-ZAG.
inter. NONE

Pitch of seams DOUBLE BUTT STRAP

Diameter of rivet holes in

circ. seams $\phi = 35$ mm
long. seams $\phi = 33$ mm

Pitch of rivets

106, 6 mm
230 mm

Percentage of strength of circ. end seams

plate 61.7%
rivets 118.4%

Percentage of strength of circ. intermediate seam

plate 83%
rivets 104%

Percentage of strength of longitudinal joint

plate 83%
rivets 104%
combined 86.8%

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

Mean 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 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,
or
Over threads $\phi = 76$ 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,
or
Over threads $\phi = 38$ mm

No. of threads per inch

9 PER 1"

Area supported by each stay

41215 mm²

Working pressure by Rules 13.9 kg/cm^2 Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, $48 \text{ mm } \phi$ or Over threads —
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 { Plain 76.19 mm Thickness 3.65 mm No. of threads per inch 9
Stay 76.19 mm Thickness 3.65 mm
Pitch of tubes $103 \times 103 \text{ mm}$ Working pressure by Rules 13.5 kg/cm^2 Manhole compensation: Size of opening
shell plate $400 \times 300 \text{ mm}$ Section of compensating ring $240 \times 31 \text{ mm}$ - 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 { Plate —
Rivets —
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 { 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 o
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 1
Rules — Pressure to which the safety valves are adjusted — Hydraulic test pressur
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,

Manufactur

Dates { During progress of { Are the approved plans of boiler and superheater forwarded herewith
of Survey { work in shops - - - (If not state date of approval.)
while { During erection on {
building { board vessel - - - 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

kg/cm^2 13 - N° 1875
27.8.42

PORT:

CANT. RIUNITI DELL'ADRIATICO
F.M.S.A. - TRIESTE

kg/cm^2 13 - N° 1876
9.9.42.

Survey Fee £

Travelling Expenses (if any) £

When applied for, 18/8/42

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



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Foundation