

Received at London Office

of writing Report 25.8.59 When handed in at Local Office 19 Port of Rijeka

No. in *Survey held at* T.P.K. - Zagreb *Date, First Survey* 29.1.1959 *Last Survey* 18.6. 1959
 of Book

(Number of Visits.....) Tons { Gross.....
Net.....

built at Split By whom built Brodogradiliste "Split" Yard No. 161 When built 1902

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

Boilers made at Zagreb By whom made Tvornica Parnih Kotlova Boiler No. 1524 When made 1959

N as per Rule *Owners* *Port belonging to*

ULTRATUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Vereinigte Ostereichische Eisen Linz-Donau and Acciaierie Ferriere Lombarde Falck

Total Heating Surface of Boilers..... 65¹/₂ sq. metres Of Superheaters..... -

total for Register Book 65 sq. metres Is forced draught fitted yes Cook or Oil fired Oil fired

One cylindrical Scotch type

Working Pressure 7 kg/sq. cm.

tested by hydraulic pressure to 14 kg/sq. cm. Date of test 18.6.59 No. of Certificate Rka. No. 46 Can each boiler be worked separately -

Area of Firegrate in each Boiler..... 14.17 No. and Description of safety valves to each boiler 2 ordinary with enclosed spring type

area of each set of valves per boiler { $\frac{471}{\text{per Rule}} \dots \frac{3280}{5652} \text{ sq. in.}$ Pressure to which they are adjusted \dots Are they fitted with easing gear \dots

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 2200 mm Length 2960 mm Shell plates: Material S.M.Steel Tensile strength 44-55 kg/sq.mm

fusion welded, state name of welding Firm..... Have all the requirements of the Rules for Class I vessels

been complied with..... Thickness 11 mm Are the shell plates welded or flanged..... Description of riveting: circ. seams } end..... D.R. I.A.P.

D.R. But Strap

ng. seams..... Diameter of rivet holes in { circ. seams..... 17 mm.....
long seams..... 17 mm..... Pitch of rivets { 59.853 ✓
71 ✓

Percentage of strength of circ. end seams { plate..... 77.6
rivets..... 53.5

Percentage of strength of circ. intermediate seam { plate.....
rivets.....

percentage of strength of longitudinal joint	plate.....	76
	rivets.....	155.8
	combined.....	91.6

Thickness of butt straps { outer 11 mm
inner 11 mm

No. and Description of Furnaces in each Boiler 2 corrugated Fox type

Material S.M. Steel 2317 Tensile strength 44.1 - 46.1 kg/sq. mm Smallest outside diameter 650/750 mm

length of plain part $\left\{ \begin{array}{l} \text{top. } 21.43 \text{ mm} \\ \text{bottom } 21.43 \text{ mm} \end{array} \right.$ Thickness of plates $\frac{10}{2} \text{ mm}$ Description of longitudinal joint.....

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

End plates in steam space: Material Tensile strength Thickness 1 1/2 Pitch of stays

How are stays secured					
Tube plates: Material	front	S.M.Steel	Tensile strength	45.8 kg/sq.mm	Thickness
	back	S.M.Steel		46.9 kg/sq.mm	

Mean pitch of stay tubes in nests. 175 x 260 mm Pitch across wide water spaces.

Girders to combustion chamber tops: Material S.M. Steel 480 Tensile strength 41-47 kg/sq. mm Depth and thickness of girder

at centre 2 (130 x 12 mm) Length as per Rule 600 mm Distance apart 200 mm No. and pitch of stays

2 stays, 200 mm pitch

Combustion chamber plates: Material S.M. Steel

each
Tensile strength 41 - 47 kg/sq.mm Thickness: Sides 11 mm Back 11 mm Top 11 mm Bottom 14 mm

Pitch of stays to ditto: Sides 190 mm Back 180 mm Top 180 mm Are stays fitted with nuts or riveted over with nut.

Front plate at bottom : Material S.M.Steel Tensile strength 44-55 kg/sq .mm

Thickness 14 mm Lower back plate: Material S.M.Steel Tensile strength 44-55 kg/sq.mm Thickness 14 mm

Pitch of stays at wide water space..... Are stays fitted with nuts or riveted over.....

Join stays • Material S.M. Steel Tensile strength 44-55 kg/sq. mm

Diameter { At body of stay... 56 mm
or
Over threads... 64 mm Steel

No. of threads per inch 9 ✓

47-47 kg/cm²

Screw stays: Material..... S.M. Steel..... Tensile strength.....

Diameter { At turned off part.....
or
Over threads..... 30 mm No. of threads per inch..... 9

Are the stays drilled at the outer ends

Margin stays: Diameter { At turned off part, or Over threads.

No. of threads per inch

Tubes: Material S.M. Steel

External diameter

Plan 63.5 mm

Stay 63.5 mm

Thickness

3 mm

9 mm

No. of threads per inch 9

Pitch of tubes

87 x 87 2

Manhole compensation: Size of opening in

shell plate 300x400 mm

Section of compensating ring

13x70 mm

No. of rivets and diameter of rivet holes 2x24 & 17 mm

Outer row rivet pitch at ends

60 mm

Depth of flange if manhole flanged

70 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

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

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 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

forgings and castings

and after assembly in place

Are drain cocks

valves fitted to free the superheater from water where necessary

Chapter "J"

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes

TVORNICAPARNIH
KOTLOVA
ZAGREB - ŽITNJAK

The foregoing is a correct description,

Manufacturer

Dates
of Survey
while
buildingDuring progress of
work in shops - -
During erection on
board vessel - - -Are the approved plans of boiler and superheater forwarded herewith Yes
(If not state date of approval.) 21.5.57

Total No. of visits 13

Is this Boiler a duplicate of a previous case. yes

If so, state Vessel's name and Report No. Yard No. 152 & 154

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

The boiler referred herein has been constructed under Special Survey in accordance with the Rules of the Society approved plans and Secretary letters.

The material and workmanship are good.

One copy is forward to Split Office.

Survey Fee ... £ 21: 00 00 + 12600.-Din.

Travelling Expenses (if any) Din. 14446.-

When applied for, 19.

When received, 19.

Engineer Surveyor to Lloyd's Register of Shipping.

(J. Racki)

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Lloyd's Register
Foundation

Committee's Minute FRIDAY - 2 DEC 1960

Assigned

See Rpt. 1.