

## REPORT ON BOILERS.

No. 4372

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Date of writing Report JULY 11<sup>TH</sup> 1953 When handed in at Local Office. 1953 Port of LOS ANGELES HARBOR. CALIFORNIA.No. in Reg. Book. 73296 Survey held at SAN PEDRO, CALIFORNIA Date, First Survey JANUARY 22-52 Last Survey JUNE 12<sup>TH</sup> 1953

on the MV BOZA RICA EX FEDE. (Number of Visits. 6) Tons Gross 7884 Net 4459

Built at TRIESTE By whom built CANTIERI RIUNITI DELL'ADRIATICO Yard No. 1213 When built 1938

Engines made at TRIESTE By whom made CANTIERI RIUNITI DELL'ADRIATICO Engine No. LS 688 When made 1938

Boilers made at TRIESTE By whom made CANTIERI RIUNITI DELL'ADRIATICO Boiler No. ✓ When made 1938

Nominal Horse Power Owners PETROLEOS MEXICANOS Port belonging to TAMPECO

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel (Letter for Record)

Total Heating Surface of Boilers 383 m<sup>2</sup> Is forced draught fitted YES Coal or Oil fired OIL ✓No. and Description of Boilers TWO SINGLE ENDED CYLINDRICAL MULTITUBULAR Working Pressure 12.7 kg/cm<sup>2</sup> 19066Tested by hydraulic pressure to 22.5 kg/cm<sup>2</sup> Date of test FEB 4-1952 No. of Certificate Can each boiler be worked separately YES ✓

Area of Firegrate in each boiler OIL FIRED No. and Description of Safety valves to each boiler TWO SPRING LOADED ✓

Area of each set of valves per boiler {per Rule 13.2 ✓ as fitted 14.137 SQ INCHES Pressure to which they are adjusted 180 PSI. ✓ 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 FITTED ✓

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 Is the bottom of the boiler insulated YES ✓

Largest internal diameter of boilers 3880 mm ✓ Length 3305 mm ✓ Shell plates: Material OH STEEL Tensile strength

Thickness 27 mm ✓ Are the shell plates welded or flanged FLANGED NO Description of riveting: circ. seams {end ZIGZAG D.R. ✓ inter. ✓

Long. seams DIAGONAL TRDBS ✓ Diameter of rivet holes in {circ. seams 31 mm 322.4 ✓ long. seams 28 mm 293.2 ✓ Pitch of rivets {102.9 mm 198 mm ✓

Percentage of strength of circ. end seams {plate 68.6 rivets 54.5 Percentage of strength of circ. intermediate seam {plate rivets

Percentage of strength of longitudinal joint {plate 85.2 rivets 109.5 107.1 combined 92.2 ✓

Thickness of butt straps {outer 21 mm inner 24 mm No. and Description of Furnaces in each Boiler TWO MORISON TYPE ✓

Material OH STEEL Tensile strength 55000 PSI. MIN. Smallest outside diameter 40 5/16" 1028 mm ✓

Length of plain part {top bottom Thickness of plates {crown 5/8" 14 mm bottom 5/8" Description of longitudinal joint FORGED

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

End plates in steam space: Material OH STEEL Tensile strength 41-47 kg/cm<sup>2</sup> ✓ Thickness 30 mm ✓ Pitch of stays 475 mm 470x457 ✓

How are stays secured NUTS INSIDE AND OUTSIDE WITH WASHERS

Tube plates: Material {front OH STEEL Tensile strength {41-47 kg/cm<sup>2</sup> Thickness {26 mm back OH STEEL 41-47 kg/cm<sup>2</sup> 19 mm ✓

Mean pitch of stay tubes in nests 184 mm 187 mm Pitch across wide water spaces 190 mm 336 mm ✓

Girders to combustion chamber tops: Material OH STEEL Tensile strength 41-47 kg/cm<sup>2</sup> 44-55 kg/cm<sup>2</sup> Depth and Thickness of girder

at centre 250 mm + 16 mm Length as per Rule - 830 mm Distance apart 43 mm 203 mm No. and pitch of stays

in each 91X @ 180 mm 3 @ 180 mm Combustion chamber plates: Material OH STEEL

Tensile strength 41-47 kg/cm<sup>2</sup> Thickness: Sides 17 mm Back 18 mm Top 17 mm Bottom 20 mm

Pitch of stays to ditto: Sides 180 mm x 200 mm Back 209 mm x 189 mm Top 180 mm x 203 mm Are stays fitted with nuts or riveted over REMAINDER RIVETED

Front plate at bottom: Material OH STEEL Tensile strength 44-55 kg/cm<sup>2</sup> 41-47 kg/cm<sup>2</sup>Thickness 26 mm Lower back plate: Material OH STEEL Tensile strength 44-55 kg/cm<sup>2</sup> 41-47 kg/cm<sup>2</sup> Thickness 23 mm

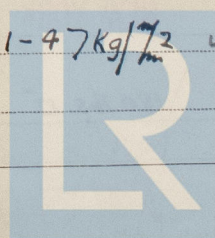
Pitch of stays at wide water space 457 mm 354 mm x 189 mm Are stays fitted with nuts or riveted over NUTS. INSIDE AND OUTSIDE

Main stays: Material OH STEEL Tensile strength 44-55 kg/cm<sup>2</sup> ✓

Diameter {At body of stay 76 mm or Over threads No. of threads per inch SIX ✓

Screw stays: Material OH STEEL Tensile strength 41-47 kg/cm<sup>2</sup> ✓

Diameter {At turned off part 1 1/2" + 1 3/4" or Over threads No. of threads per inch NINE ✓



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Are the stays drilled at the outer ends No ✓ Margin stays: Diameter { At turned off part, or Over threads. 76 1/4 ✓

No. of threads per inch SIX NINE ✓

Tubes: Material OH STEEL ✓ External diameter { Plain 63.5 ✓ Stay 63.5 ✓ Thickness { 3.65 ✓ 5.7 ✓ No. of threads per inch NINE ✓

Pitch of tubes 95 7/8 x 92mm ✓ Manhole compensation: Size of opening in shell plate 300 x 400 ✓ Section of compensating ring 700 x 800 ✓ No. of rivets and diameter of rivet holes 40 + 29 ✓

Outer row rivet pitch at ends 198 7/8 ✓ Depth of flange if manhole flanged 95 7/8 ✓ 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 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, ✓ Manufacturer. -

Dates of Survey { During progress of work in shops - ✓ Are the approved plans of boiler and superheater forwarded herewith YES (If not state date of approval.)

while building { During erection on board vessel - ✓ Total No. of visits - ✓

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

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

The two multitubular Boilers were constructed under the Special Survey of the Registro Italiano Surveyors, and have been hydrostatically tested and examined under steam, sizes verified as far as practicable.

The Boilers and Machinery of this vessel are in good condition and eligible in my opinion to be classed with record of LMC 6-53 and notation DBS 3-53

Survey Fee ... £ \$100.00 : When applied for, - 19

Travelling Expenses (if any) £ - : When received, - 19

Bloomfield  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute NEW YORK NOV 10 1953

Assigned 2 DBS. 180 lbs. □



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