

## REPORT ON BOILERS.

No. 194.

Received at London Office

15 AUG 1932

Date of writing Report 26<sup>th</sup> July 1932. When handed in at Local Office 26<sup>th</sup> July 1932 Port of VALENCIA

No. in Survey held at Valencia. Date, First Survey 5-9-31. Last Survey 21-7-32

(Number of Visits 24.) Tons { Gross Net

on the

Master Built at Cadix. By whom built Soc. Española de Constr. Naval Yard No. 66. When built

Engines made at By whom made Engine No. When made

Boilers made at VALENCIA By whom made Unión Naval de Levante S.A. Boiler No. 525-526 When made 1932

Nominal Horse Power 190 (2 Blrs) Owners Compañía Arrendataria Monopolio Petroleos S.A. Port belonging to

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel 128 (Letter for Record S)

Total Heating Surface of Boilers 2 x 129 sq m<sup>2</sup> Is forced draught fitted Yes Coal or Oil fired OilNo. and Description of Boilers 2 Single Ended Returns Tube Marine Type Working Pressure 10.5 Kgs/cm<sup>2</sup>Tested by hydraulic pressure to 19.25 Kgs/cm<sup>2</sup> of test 19-7-32 No. of Certificate 108 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 2 - spring loaded

Area of each set of valves per boiler { per Rule 8210 sq m/m<sup>2</sup> as fitted 2 a 72½ m/m dia. (Approved) @ 70 m/m D.A. Pressure to which they are adjusted 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

Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated

Largest internal dia. of boilers 3500 m/m Length 3250 m/m Shell plates: Material Steel Tensile strength 44.50 Kgs/mm

Thickness 27 m/m Are the shell plates welded or flanged No Description of riveting: circ. seams { end D R Lap

Long. seams TR DBS Diameter of rivet holes in { circ. seams 28 m/m Pitch of rivets { 90 m/m

Percentage of strength of circ. end seams { plate 69% rivets 41.6% Percentage of strength of circ. intermediate seam { plate 86.4% rivets 85.2%

Percentage of strength of longitudinal joint { combined 89.84% Working pressure of shell by Rules 14.1 Kgs/cm<sup>2</sup>

Thickness of butt straps { outer 20 m/m No. and Description of Furnaces in each Boiler 2 Corrugated Morison Section

Material Steel Tensile strength 41.47 Kgs/mm<sup>2</sup> Smallest outside diameter 1020 m/m

Length of plain part { top Thickness of plates { crown 15 m/m Description of longitudinal joint Fire-weld

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 15 Kgs/cm

End plates in steam space: Material Steel Tensile strength 41.47 Kgs/mm Thickness 20 m/m Pitch of stays 380m/m x 360m/m

How are stays secured Nuts and washers inside, Nuts and doubler outside Working pressure by Rules 12.6 Kgs/cm<sup>2</sup>

Tube plates: Material { front Steel Tensile strength { 41.47 Kgs/mm Thickness { 20 m/m

Mean pitch of stay tubes in nests 190 m/m Pitch across wide water spaces 360 m/m Working pressure { front 10.7 Kgs/cm

Girders to combustion chamber tops: Material Steel Tensile strength 44.50 Kgs/mm Depth and thickness of girder

at centre 170 m/m x (2x19m/m) Length as per Rule 696 m/m Distance apart 180 m/m No. and pitch of stays

in each 3 a 180 m/m Working pressure by Rules 14.1 Kgs/cm Combustion chamber plates: Material Steel

Tensile strength 41.47 Kgs/mm Thickness: Sides 15 m/m Back 16 m/m Top 15 m/m Bottom 19 m/m

Pitch of stays to ditto: Sides 180 x 200 Back 210 x 210 Top 180 x 180 Are stays fitted with nuts or riveted over Fitted with nuts

Working pressure by Rules 14 Kgs/cm Front plate at bottom: Material Steel Tensile strength 41.47 Kgs/mm

Thickness 20 m/m Lower back plate: Material Steel Tensile strength 41.47 Kgs/mm Thickness 20 m/m

Pitch of stays at wide water space 360 m/m Are stays fitted with nuts or riveted over Fitted with nuts

Working Pressure 13 Kgs/cm Main stays: Material Steel Tensile strength 44.50 Kgs/mm

Diameter { At body of stay, 68 m/m No. of threads per inch 6 Area supported by each stay 360 x 380 sq m/m

Working pressure by Rules 16.8 Kgs/cm Screw stays: Material Steel Tensile strength 41.47 Kgs/mm

Diameter { At turned off part, 35 m/m No. of threads per inch 9 Area supported by each stay 210 x 210 sq m/m



Working pressure by Rules **10.5 Kgs/cm** the stays drilled at the outer ends **No** Margin stays: Diameter { At turned off part, or Over threads **39 m/m** ✓  
No. of threads per inch **9** ✓ Area supported by each stay **105 x 180 sq m/m** Working pressure by Rules **10.5 Kgs/cm**  
Tubes: Material **Steel** External diameter { Plain **63 m/m** ✓ Thickness { **4 m/m** ✓ No. of threads per inch **9** ✓  
Pitch of tubes **95 x 95 m/m** ✓ Working pressure by Rules **21 Kgs/cm** Manhole compensation: Size of opening in  
shell plate **450 m/m x 550 m/m** Section of compensating ring **Flanged ring** No. of rivets and diameter of rivet holes **48 a 28 m/m**  
Outer row rivet pitch at ends **90 m/m** Depth of flange if manhole flanged **90 m/m** ✓ 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 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 { Tubes 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 Working pressure as per  
Rules Pressure to which the safety valves are adjusted Hydraulic test pressure  
tubes, 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 23 inclusive for boilers been complied with

The foregoing is a correct description

Dates of Survey { During progress of work in shops - - Sept 9. 10. 15. 30. Oct 16. 20. Nov 9. Dec 5. 23.  
Jan 5. 19. Feb 3. 25 March 7. 21 April 13. 29  
May 4. 12. 19 June 2. 21. 28 July 6. 14. 19. 21.  
while building { During erection on board vessel - - -  
Are the approved plans of boiler and superheater forwarded herewith **1/5/30**  
(If not state date of approval.)  
Total No. of visits

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **These boilers have been constructed under Special Survey in accordance with the Rules and approved plan.**

**Materials and workmanship good.**

**These boilers are intended for dispatch to the Sociedad Española de Construcción Naval, Matagorda, Cadiz for their vessel Nº 66.**

Survey Fee ... .. £ **1500** 00

Travelling Expenses (if any) £ **454** 00

When applied for, **27<sup>th</sup> July** 1922.

When received, **Sept 4<sup>th</sup>** 1922

Paid see letter

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRL 15 JUN 1924**

Assigned

**See Cd. J.E. Apr 14.21**



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Foundation