

REPORT ON BOILERS.

No. 194.

15 AUG 1932

Received at London Office

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

No. in Survey held at Valencia. Date, First Survey 5-9-31. Last Survey 27-7-32

(Number of Visits 24.) Tons ^{Gross} _{Net}

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

Engines made at Valencia. By whom made Unión Naval de Levante S.A. Engine No. 525-526 When made 1932

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 Valencia

MULTITUBULAR BOILERS ~~MAIN, AUXILIARY, OR DONKEY.~~

Manufacturers of Steel 128 (Letter for Record S)

Total Heating Surface of Boilers 2 x 129 sq m² Is forced draught fitted Yes Coal or Oil fired Oil

No. and Description of Boilers 2 Single Ended Returns Tube Marine Type Working Pressure 10.5 Kgs/cm²

Tested by hydraulic pressure to 19.25 Kgs/cm² of test 19-7-32 No. of Certificate 108 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 210 sq m² No. and Description of safety valves to each boiler 2 - spring loaded

Area of each set of valves per boiler 2 a 72 1/2 m/m dia. (Approved) @ 70 m/m D.A. Pressure to which they are adjusted 108 Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler Yes

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 D R Lap

Long. seams TR DBS Diameter of rivet holes in 28 m/m Pitch of rivets 206 m/m

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

Percentage of strength of longitudinal joint 89.84% Working pressure of shell by Rules 14.1 Kgs/cm²

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

Material Steel Tensile strength 41.47 Kgs/mm² Smallest outside diameter 1020 m/m

Length of plain part 15 m/m Thickness of plates 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/cm²

Tube plates: Material Steel Tensile strength 41.47 Kgs/mm Thickness 18 m/m

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

Girders to combustion chamber tops: Material Steel Tensile strength 44.50 Kgs/mm Depth and thickness of girder 170 m/m x (2x19m/m)

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 3

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 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 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** Stay **63 m/m** } Thickness { **4 m/m** **8 1/2 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 x 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
[Signature]
 Manufacturer

Dates of Survey { During progress of work in shops - - - } Sept 9-10-15-30, Oct 16-20, Nov 4-5-23, 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
 { During erection on board vessel - - - }
 Are the approved plans of boiler and superheater forwarded herewith **I/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 } When applied for, **24th July 1922**
 Travelling Expenses (if any) £ **454** /⁰⁰ } When received, **Sept 4th 1922**
 Paid see letter **5** *[Signature]*

Engineer Surveyor to Lloyd's Register of Shipping.

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

Assigned *See Coly. J.E. Rpt 1421*

