

# REPORT ON BOILERS.

No. **9958**

Received at London Office **19 JUL 1927**

Port of **GENOA**  
 Date, First Survey **Nov. 10th 1926** Last Survey **July 7th 1927**  
 (Number of Visits **37**)  
 on the **"CONTE GRANDE"**  
 Built at **Sampierdarena Gen** By whom built **Ansaldo S.A.** Yard No. When built **1927**  
 By whom made Engine No. When made  
 Made at **Sampierdarena, Genoa** By whom made **Ansaldo S.A.** Boiler Nos. **2974-5** When made **1927**  
**9 + 2980.**  
 Final Horse Power **4512** Owners **Lloyd Sabaudo** Port belonging to **Genoa**

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel **Messrs August Thyssen Hutk & Messrs Krupp etc.** (Letter for Record **S**)  
 Heating Surface of Boilers **4088 sq. metres** Is forced draught fitted **7 DB** Coal or Oil fired **Oil**  
 and Description of Boilers **7 Double Ended Cylindrical Multitubular Scotch Type** Working Pressure **15.46 Kg.cm<sup>2</sup>**  
 Tested by hydraulic pressure to **26.70 Kg/cm<sup>2</sup>** Date of tests **28-4-27, 4-5-27, 18-5-27, 31-5-27, 7-7-27.** No. of Certificate **186, 187, 190, 193, 191, 194** Can each boiler be worked separately **-**  
 of Firegrate in each Boiler **Oil fired** No. and Description of safety valves to each boiler **-**  
 of each set of valves per boiler { per Rule **-** Pressure to which they are adjusted **-** Are they fitted with easing gear **-**  
 Use of donkey boilers, state whether steam from main boilers can enter the donkey boiler **-**  
 Test distance between boilers or uptakes and bunkers or woodwork **-** Is oil fuel carried in the double bottom under boilers **-**  
 Test distance between shell of boiler and tank top plating **-** Is the bottom of the boiler insulated **-**  
 Test internal dia. of boilers **5030 m/m** Length **6700 m/m** Shell plates: Material **Steel** Tensile strength **44-50 kg.s.**  
 Thickness **41.5 m/m** Are the shell plates welded or flanged **- No** Description of riveting: circ. seams { end **Double Riveted**  
 seams **Treble riveted** Diameter of rivet holes in { circ. seams **40 m/m.** inter. **Treble**  
 { long. seams **40 m/m.** Pitch of rivets { **100 & 117 m/m.**  
 Percentage of strength of circ. end seams { plate **60%** Percentage of strength of circ. intermediate seam { plate **65.8%**  
 { rivets **49.53%** { rivets **63.5%**  
 Percentage of strength of longitudinal joint { plate **85.4%** Working pressure of shell by Rules **15.46 kg.cm<sup>2</sup>**  
 { rivets **85%** { combined **87.7%**  
 Thickness of butt straps { outer **32 m/m** No. and Description of Furnaces in each Boiler **8 - Morrison Corrugated**  
 { inner **35 m/m**  
 Material **Steel** Tensile strength **41-47** Smallest outside diameter **1057 m/m**  
 Thickness of plates { crown **16 m/m** Description of longitudinal joint **Welded**  
 { bottom **16 m/m**  
 Working pressure of furnace by Rules **15.56 kg.cm<sup>2</sup>**  
 Material **Steel** Tensile strength **41-47** Thickness **31 m/m** Pitch of stays **468 x 432 m/m**  
 Are stays secured **Double nuts and washers** Working pressure by Rules **15.56 kg.cm<sup>2</sup>**  
 plates: Material { front **Steel** Tensile strength { **41-47** Thickness { **23 m/m**  
 { back **Steel** { **-** { **23 m/m**  
 Pitch of stay tubes in nests **270 x 210 m/m** Pitch across wide water spaces **356 m/m** Working pressure { front **15.9 kg.cm<sup>2</sup>**  
 { back **15.7 kg.cm<sup>2</sup>**  
 Material **Steel** Tensile strength **44-50** Depth and thickness of girder  
 Length as per Rule **746.5 m/m** Distance apart **203 m/m** No. and pitch of stays  
 Working pressure by Rules **20.5 kg.cm<sup>2</sup>** Combustion chamber plates: Material **Steel**  
 Thickness: Sides **17.5 m/m** Back **18.5 m/m** Top **17.5 m/m** Bottom **22 m/m**  
 Are stays fitted with nuts or riveted over **Nuts**  
 Working pressure by Rules **16.3 & 16.0 kg.cm<sup>2</sup>** Material **Steel** Tensile strength **41-47**  
 Lower back plate: Material **-** Tensile strength **-** Thickness **-**  
 Are stays fitted with nuts or riveted over **-**  
 Main stays: Material **Steel** Tensile strength **44-50**  
 At body of stay, **86 m/m** No. of threads per inch **6** Area supported by each stay **202,176 sq.mm.**  
 Over threads **-**  
 Working pressure by Rules **19.8 kg.cm<sup>2</sup>** Screw stays: Material **Steel** Tensile strength **41-47**  
 At turned off part, **-** No. of threads per inch **9** Area supported by each stay **46284 m/m<sup>2</sup> & 51562 m/m<sup>2</sup>**  
 Over threads **44.5 m/m**

Working pressure by Rules **17.7 & 16** <sup>kg.cm2</sup> Are the stays drilled at the outer ends **No** ✓ Margin stays: Diameter <sup>At turned off part.</sup> <sub>or</sub> <sup>Over threads</sup> **50.8 m/m** ✓  
 No. of threads per inch **9** ✓ Area supported by each stay **47705 sq.m/m** Working pressure by Rules **23.6 kg.cm2.**  
 Tubes: Material **Steel** External diameter <sup>Plain</sup> **76** Thickness **4.06 m/m** <sup>8 LSG</sup> ✓ No. of threads per inch **9** ✓  
 Pitch of tubes **108 x 105 m/m** Working pressure by Rules **17.5 kg.cm2** Manihole compensation: Size of opening **40 - 40 mm.dia.** ✓  
 shell plate **404 x 540 m/m** Section of compensating ring **307 x 35 m/m** No. of rivets and diameter of rivet holes **40 - 40 mm.dia.** ✓  
 Outer row rivet pitch at ends **273 m/m** Depth of flange if manhole flanged **102 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 <sup>Plate</sup> <sub>Rivets</sub>  
 Internal diameter Working pressure by Rules Thickness of crown No. and diameter of rivets  
 stays Inner radius of crown Working pressure by Rules  
 How connected to shell Size of doubling plate under dome Diameter of rivet holes and  
 of rivets in outer row in dome connection to shell

Type of Superheater Manufacturers of <sup>Tubes</sup> <sub>Steel castings</sub>  
 Number of elements Material of tubes Internal diameter and thickness of tubes  
 Material of headers Tensile strength Thickness Can the superheater be shut off  
 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  
 Rules Pressure to which the safety valves are adjusted Hydraulic test pressure  
 tubes castings and after assembly in place Are drain cocks or valves  
 to free the superheater from water where necessary

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with **-**

“ANSALDO,, Società Anonima  
 STABILIMENTO MECCANICO  
 SAMPIERDARENA

THE DIRECTOR  
 The foregoing is a correct description,  
*[Signature]* Manufacturer

Dates of Survey <sup>During progress of work in shops - -</sup> **1926-Nov.10,19 Dec.2,6,15,1927- Jan.27, Feb.3,8,8,14,18,22, March 2,3,4,10,11, April 7,11,12,25,28,28, May 3,4,12,16,18,19,25,31** Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) ✓  
<sup>During erection on board vessel</sup> **June 3,11,24,28,30 July 7.** Total No. of visits **37**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **These boilers have been constructed tested materials under Special Survey and in accordance with approved plans, Secretary's letters Rule Requirements. The workmanship and materials are good and when tested hydraulically at 26.7 cm. were found tight and satisfactory. These boilers are intended for the S/S "CONTE GRANDE" now building at Trieste, and will be eligible in our opinion to be classed in the Register Book when they have been satisfactorily fitted on all safety valves and mountings fitted; safety valves adjusted under steam and accumulation tests satisfactorily carried out.**

Survey Fee ... Lit. 750.-  
 Travelling Expenses (if any) £ " 500.-

When applied for, **16-7-1927** JM.  
 When received, **29-7-1927** Recd: Lie Loidon **29/11/27**  
**Y.R. Morrison & J.W. Leicester**  
 Engineer Surveyors to Lloyd's Register of Ships

Committee's Minute **TUES. 3 APR 1928**  
 Assigned *See Tri. G.E. vol No 7869*

