

# REPORT ON WATER TUBE BOILERS.

No. 25394

Received at London Office \_\_\_\_\_  
 Date of writing Report 29/9/1960 When handed in at Local Office 29/9/1960 Port of Genoa  
 No. in Survey held at Genoa & La Spezia Date, First Survey 6/6/58 Last Survey 13/7/1960  
 Reg. Book. \_\_\_\_\_ (Number of Visits 67) Gross 20700 (provisional)  
 on the Single Screw "CRISTINA D'AMICO" Tons Net \_\_\_\_\_  
 Built at La Spezia-Muggiano By whom built S.A. Ansaldo-Cantieri di Muggiano Yard No. 1540 When built 1960  
 Engines made at Genoa-Sampierdarena By whom made S.A. Ansaldo-Stab. Meccanico Engine No. 1643 When made 1959  
 Boilers made at Genoa-Sampierdarena By whom made S.A. Ansaldo-Stab. Meccanico Boiler No. 6314 When made 1959  
 HS for Register Book 2418 sq. mt. Owners "ORTIGIA" S.p.A. di Navigazione Port belonging to Palermo

## WATER TUBE BOILERS—MAIN, AUXILIARY OR DONKEY—Manufacturers of Steel S.I.A.C. - DALMINE.

Date of Approval of plan 18-1-54. No. and Description or Type of Boilers TWO—Two drums Foster Wheeler Working Pressure 47 Kg/cm<sup>2</sup> Tested by Hydraulic Pressure to 74 Kg/cm<sup>2</sup> Date of Test 29-7-59  
 No. of Certificate 434-435 Can each boiler be worked separately. Yes Total Heating Surface of Boilers 718x2 m<sup>2</sup> Superheaters 116,5x2 m<sup>2</sup>  
 Half Economisers 749 m<sup>2</sup> Is forced draught fitted. Yes Area of Fire Grate (coal) in each Boiler -  
 No. and type of burners (oil) in each boiler Three - Todd System. No. and description of safety valves on each boiler TWO - 1 1/2" Foster Type 38 SV

Area of each set of valves per boiler } per rule as approved  
 } nozzles throat diam.: Pressure to which they  
 } as fitted 1,031" ✓  
 are adjusted 48.4 Kg/cm<sup>2</sup> 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 1500 mm. Height of boiler 8850 mm.

Width and length 5800 x 5200 mm. Steam Drums:—Number in each boiler One Inside diameter 680 x 705 mm.  
 Thickness of plates 90 & 40 mm. Range of tensile strength 49/55 Kg/mm<sup>2</sup> Are drum shell plates welded or flanged fusion welded If fusion welded, state name of welding firm Ansaldo Stabilimento Meccanico Have all the requirements of the Rules for Class I vessels been complied with. Yes Description of riveting:—Circ. seams - long. seams -  
 Diameter of rivet holes in long. seams - Pitch of rivets - Thickness of straps 32, 4-51, 4 mm. Percentage strength of long. joint:—Plate - Rivet - Diameter of tube holes in drum 83, 7-102, 7 mm. Pitch of tube holes 50-81-100 mm.

Percentage strength of shell in way of tubes as approved Steam Drum Heads or Ends Range of tensile strength 42/48 Kg/mm<sup>2</sup>  
 Thickness of plates 65 mm. Radius or how stayed 1200 mm. Size of manhole 300 x 400 mm. Water Drums:—Number in each boiler One Inside diameter 840 mm. Thickness of plates 63 mm. Range of tensile strength 44/50 Kg/mm<sup>2</sup> Are drum shell plates welded or flanged fusion welded If fusion welded, state name of welding firm Ansaldo-Stab. Meccanico Have all the requirements of the Rules for Class I vessels been complied with. Yes Description of riveting:—Circ. seams - long. seams -  
 Diameter of rivet holes in long. seams - Pitch of rivets - Thickness of straps 32, 4-51, 4 mm. Percentage strength of long. joint:—Plate - Rivet - Diameter of tube holes in drum 83, 7-102, 7 mm. Pitch of tube holes 50-100-114 mm.

Percentage strength of drum shell in way of tubes as approved Water Drum Heads or Ends Range of tensile strength 42/48 Kg/mm<sup>2</sup>  
 Thickness of plates 42 mm. Radius or how stayed 750 mm. Size of manhole 300 x 400 mm.  
 Headers or Sections Number Three 158x158 mm. Material S.M. steel Thickness 26 mm. Tested by hydraulic pressure to 74 Kg/cm<sup>2</sup>  
 Tubes:—Diameter 32, 51, 83, 102 mm. Thickness 3-4, 5-9-7 mm. Number 1386, 253, 2, 6. Steam Dome or Collector:—Description of joint to shell - Inside diameter - Thickness of shell plates - Range of tensile strength - Description of longitudinal joint - If fusion welded, state name of welding firm - Have all the requirements for the Rules for Class I vessels been complied with. - Diameter of rivet holes - Pitch of rivets - Thickness of straps - Percentage strength of long. joint - plate - rivet -

Crown or End Plates:—Range of tensile strength - Thickness - Radius or how stayed -  
 SUPERHEATER:—Number in each boiler Two. Inside diameter 228 mm.  
 Thickness 32 mm. Material 0,5 Mo. steel Range of tensile strength 45/55 Kg/mm<sup>2</sup> Are drum shell plates welded or flanged seamless If fusion welded, state name of welding firm - Have all the requirements of the Rules for Class I vessels been complied with. - Description of riveting:—Circ. seams - long. seams -  
 Diameter of rivet holes in long. seams - Pitch of rivets - Thickness of straps - Percentage strength of long. joint:—Plate - Rivet - Diameter of tube holes in drum 32, 4 mm. Pitch of tube holes 57 mm. Percentage strength of drum shell in way of tubes as approved Headers or Ends:—flat Thickness 38 mm. Range of tensile strength 45/55 Kg/mm<sup>2</sup>  
 Radius or how stayed - Sightholes 51,3 mm. Number, diameter, and thickness of tubes 184-32 mm.-3 mm.

Tested by hydraulic pressure to 74 Kg/cm<sup>2</sup> Date of test 6 & 10/8/59. Is a safety valve fitted to each section of the superheater with nozzle throat diameter 2,25" No. and description of safety valves ONE - 3" Foster Type 38 SV Pressure to which they are adjusted 44 Kg/cm<sup>2</sup> Is easing gear fitted. Yes.  
 Spare Gear. Has the spare gear required by the Rules been supplied. Yes

ANSALDO S. A.  
 The Stabilimento Meccanico  
 Manufacturer.

Dates of Survey } During progress of work in shops - - } from 6/6/58 to 10/8/59 Is the approved plan of boiler forwarded herewith. no  
 while building } During erection on board vessel - - } 6/11/59 to 13/7/60 Total No. of visits 55+ 1/2

Is this boiler a duplicate of a previous case. Yes If so, state vessel's name and report No. "Ginevra Fassio"—See Genoa Rpt. N° 24085.

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c. These boilers have been constructed under special survey of tested materials and are in accordance with the approved plans, Secretary's letters and Rule Requirements. The materials, workmanship & welding technique are good. The boiler drums have been constructed in accordance with the Rule Requirements for fusion welded pressure vessel's Class 1. The X-ray negatives taken on the entire welded seams have been examined and welding found sound. The result of the routine tests were found satisfactory. Upon completion of the boilers have been examined under hydraulic pressure to 74 Kg/cm<sup>2</sup> and found tight and sound in every respect at that pressure. Afterwards the boilers have been satisfactorily fitted & fixed on board, examined under steam and the safety valves adjusted as above.  
 Survey Fee 591.000 = 12.502.350  
 Travelling Expenses (if any) £ 29.465  
 REV. TAX (See Rpt. 10/10/59)  
 When applied for 10-10-1959  
 When received 8/21 1960  
 (A. Grasselli, W. Giunti & F. Battagli)

FRIDAY 11 NOV 1960  
 Date \_\_\_\_\_  
 Committee's Minute See Rpt. 1.  
 Engineer Surveyor to Lloyd's Register of Shipping.



009796-009804-0034