

REPORT ON WATER TUBE BOILERS.

No.

2/286

Received at London Office

9- FEB 1956

of writing Report 29-1-56 19 When handed in at Local Office 3/2/1956 P GENOA

Survey held at GENOA Date, First Survey 10-1-55 Last Survey 17-1-56 19

Book. on the "MIRAFLORES" (Number of Visits 62) Gross 20,776 Tons

It at GENOA - SESTRI By whom built SA ANSALDO - CANTIERI NAVALI Yard No. 1499 When built 1956

Lines made at GENOA - SAMPIERDARENA By whom made SA ANSALDO - STABILIMENTO MECCANICO Engine No. 1563 When made 1955

Boilers made at - ditto - By whom made MIRAFLORES S.A. COMPANIA NAVIERA Boiler No. 3375 When made 1955

Principal Horse Power ✓ Owners PANAMENA Port belonging to PANAMA

WATER TUBE BOILERS - MAIN, ~~STEAMER, OR DONKEY~~ Manufacturers of Steel RHEINISCHE ROHRENWERKE AG. MULHEIM-DARMINE

No. and Description or Type of Approval of plan 18-1-54 Boilers THREE - TWO DRUM FOSTER WHEELER Working Pressure 47 Kg/cm² Tested by Hydraulic Pressure to 74 Kg/cm² Date of Test 10-8-55

of Certificate 3325-3334 Can each boiler be worked separately YES Total Heating Surface of Boilers 3627.59 m²

forced draught fitted YES Area of Fire Grate (coal) in each Boiler 25 per RULES

and type of burners (oil) in each boiler THREE - TUDOR SYSTEM No. and description of safety valves on COCKBURNS 1 3/4" FULL BORE SAFETY VALVE per rule AS APPROVED

in boiler WITH 3/4" SINGLE CONTROL VALVE FITTED ON Area of each set of valves per boiler AS FITTED Pressure to which they CONTROL VALVE: 0.4459 in.

adjusted 48.4 Kg/cm² Are they fitted with easing gear YES In case of donkey boilers state whether steam from main boilers can enter donkey boiler ✓

width and length 5800 mm x 5200 mm Steam Drums: Number in each boiler ONE Inside 1500 mm Height of boiler 8850 mm

thickness of plates 90 x 40 mm Range of tensile strength 49/55 Kg/mm² Are drum shell plates welded ✓

flanged FUSION WELDED If fusion welded, state name of welding firm ANSALDO - STABILIMENTO MECCANICO Have all the requirements of the Rules ✓

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 32.6 - 51.7 mm Percentage strength of 50 - 81 mm

long. joint: Plate ✓ Rivet ✓ Diameter of tube holes in drum 83.8 - 103 mm Pitch of tube holes 50 - 81 mm

percentage strength of shell in way of tubes 34.8 Steam Drum Header Ends: Range of tensile strength 42/48 mm

thickness of plates 65 mm Radius as how stayed 1200 mm Size of manhole 300 x 400 mm Water Drums: Number ONE

each boiler ONE Inside diameter 840 mm Thickness of plates 63 mm Range of tensile strength 44/50 Kg/mm² 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 ✓

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 32.6 - 51.7 mm Percentage strength of 50 - 100 mm

percentage strength of long. joint: Plate ✓ Rivet ✓ Diameter of tube holes in drum 83.8 - 103 mm Pitch of tube holes 50 - 100 mm

percentage strength of drum shell in way of tubes 35.2 Water Drum Heads as Ends: Range of tensile strength 42/48 Kg/mm²

thickness of plates 42 mm Radius as how stayed 750 mm Size of manhole 300 x 400 mm

headers or Sections: Number THREE Material S.H. STEEL Thickness 26 mm Tested by hydraulic pressure to 94 Kg/cm²

tubes: Diameter 32 - 51 - 83 - 102 mm Thickness 3 - 4.5 - 9 - 4 mm Number 1386 - 222 - 2 - 6 Steam Dome or Collector: Description of ✓

joint to shell ✓ Inside diameter ✓ Thickness of shell plates ✓ Range of tensile ✓

length ✓ 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 ✓

UPPERHEATER, ~~Donkey~~ Headers: Number in each boiler TWO Inside diameter 928 mm

thickness 32 mm Material Mo. STEEL Range of tensile strength 45/55 Kg/mm² Are drum shell plates welded ✓

or flanged SEAMLESS If fusion welded, state name of welding firm ✓ Have all the requirements of the Rules ✓

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 Header 33.4 mm Pitch of tube holes 57 mm Percentage strength of ✓

drum shell in way of tubes 43.7 Header as Ends: FLAT Thickness 38 mm Range of tensile strength 45/55 Kg/mm²

Radius or how stayed ✓ Size of as how stayed 51.3 mm Number, diameter, and thickness of tubes 184 - 32 mm - 3 mm

Tested by hydraulic pressure to 74 Kg/cm² Date of test 19-9-55 26-9-55 Is a safety valve fitted to each section of the superheater ✓

be shut off from the boiler YES No. and description of safety valves COCKBURNS 2 1/4" DOUBLE FULL BORE SAFETY VALVES

of valves SAF. VALVES: 2 x 3.9759 in. Pressure to which they are adjusted 48 x 47.5 Kg/cm² Is easing gear fitted YES

Spare Gear. Has the spare gear required by the Rules been supplied YES ANSALDO S.A. STABILIMENTO MECCANICO

The foregoing is a correct description,

Manufacturer.

Dates of Survey From 10-1-55 To 10-11-55 Is the approved plan of boiler forwarded herewith No

while building From 8-10-55 To 17-1-56 Total No. of visits 62

Is this boiler a duplicate of a previous case YES If so, state vessel's name and report No. "ARCEA PRIMA" SEE GENOA REP. N° 20595

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 AND WELDING TECHNIQUE ARE GOOD. THE BOILER DRUMS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE RULE REQUIREMENTS FOR FUSION WELDED PRESSURE VESSELS OF CLASS 1. THE X-RAY NEGATIVES TAKEN ON THE ENTIRE WELDED SEAMS HAVE BEEN EXAMINED AND WELDING TOUNSOUND. RESULTS OF THE ROUTINE TESTS WERE FULLY SATISFACTORY. UPON COMPLETION THE BOILERS HAVE BEEN EXAMINED UNDER HYDRAULIC PRESSURE TO 74 KG/CM² AND FOUND TIGHT AND SOUND IN EVERY RESPECTS AT THAT PRESSURE. AFTERWARDS THE BOILERS HAVE BEEN SATISFACTORILY FITTED AND FIXED ON BOARD, EXAMINED UNDER STEAM AND THEIR SAFETY VALVES ADJUSTED AS ABOVE.

Survey Fee 346 650.633 When applied for 16/10 1955

Travelling Expenses (if any) 85.265 When received 19

CHAR. FUND 13.012

REV. TAX 22.462

FRIDAY 16 MAR 1956

Date

Committee's Minute

See Rpt. 4

Engineer Surveyor to Lloyd's Register of Shipping.

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Lloyd's Register Foundation