

# REPORT ON WATER TUBE BOILERS.

No. 2804

Received at London Office

31 MAR 1959

Date of writing Report 12-2 1959 When handed in at Local Office 25-3- 19 59 Port of CADIZ

No. in Survey held at CADIZ Date, First Survey Nov. 6th. 1958 Last Survey Feb. 11th. 1959.

Reg. Book. on the Motor Tanker "BONIFAZ" (Number of Visits 15 ) Tons { Gross 12942 Net 7400

Built at CADIZ By whom built Astilleros de Cadiz, S.A. Yard No. 47 When built 1958

Engines made at BARCELONA By whom made La Maquinista Terrestre y Maritima Engine No. 5624 When made 1957

Boilers made at see below By whom made. Boiler No. 269/270 When made 1958

Nominal Horse Power Owners Naviera Castilla Port belonging to CADIZ

## WATER TUBE BOILERS MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel Altos Hornos de Vizcaya, Bilbao.

Date of Approval of plan 20th. August 1957 No. and Description or Type of Boilers Two Mercier C.N. Type Working Pressure 14 Kgs/cm<sup>2</sup> Tested by Hydraulic Pressure to 24.5 Kgs/cm<sup>2</sup> Date of Test. 8.28-11-58 P. 6-11-58

No. of Certificate Can each boiler be worked separately. Yes Total Heating Surface of Boilers 33516 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 2 - Low Pressure Centrifugal "RAY" System No. and description of safety valves on each boiler Two High Lift Area of each set of valves per boiler { per rule 6960 mm<sup>2</sup>. as fitted 9073 mm<sup>2</sup>. Pressure to which they are adjusted 14 Kgs/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. No Main Boilers smallest distance between boilers or uptakes and bunkers or woodwork 5 feet Height of boiler 6 metres

Width and length 3.55 M. 4.6 M. Steam Drums:—Number in each boiler One Inside diameter 1300 mm.

Thickness of plates 22 mm. Range of tensile strength Shell 41-45 Kgs/mm<sup>2</sup>. Are drum shell plates welded or flanged No 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 Double riveted lap long. seams Double riveted butt strapped

Diameter of rivet holes in long. seams 26 mm. Pitch of rivets 106 mm. Thickness of straps 22 mm. Percentage strength of long. joint:—Plate as approved Rivet as approved Diameter of tube holes in drum 48.5 mm. Pitch of tube holes 100 mm.

Percentage strength of shell in way of tubes 51-5 (Longitudinal) Steam Drum Heads or Ends:—Range of tensile strength 42-47 Kgs/mm<sup>2</sup>

Thickness of plates 22 & 24 mm. Radius or how stayed 966 mm. Size of manhole or handhole 300 mm. x 400 mm. Water Drums:—Number in each boiler None Inside diameter Thickness of plates Range of tensile strength Are drum shell plates welded or flanged 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 Pitch of tube holes

Percentage strength of drum shell in way of tubes Water Drum Heads or Ends:—Range of tensile strength

Thickness of plates Radius or how stayed Size of manhole or handhole

Headers or Sections:—Number Six Material Cast Steel Thickness 25 mm. Tested by hydraulic pressure to 50 Kgs/cm<sup>2</sup>.

Tubes:—Diameter 48.25 mm, 42.2 mm Thickness 3.225 mm, 3.5 mm. Number 166 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, Drums or Headers:—Number in each boiler Inside diameter

Thickness Material Range of tensile strength Are drum shell plates welded or flanged 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 Pitch of tube holes Percentage strength of drum shell in way of tubes Drum Heads or Ends:—Thickness Range of tensile strength Radius or how stayed Size of manhole or handhole Number, diameter, and thickness of tubes

Tested by hydraulic pressure to Date of test Is a safety valve fitted to each section of the superheater which can be shut off from the boiler No. and description of safety valves Area of each set of valves Pressure to which they are adjusted Is easing gear fitted

Spare Gear. Has the spare gear required by the Rules been supplied Yes

The foregoing is a correct description,

TALLERES MERCIER, S.A. EL DIRECTOR GERENTE

Manufacturer.

Is the approved plan of boiler forwarded herewith Yes

Dates of Survey { During progress of work in shops - - 1958 while building { During erection on board vessel - - - 1959

Nov. 6-20-25-27-28 Dec. 2-5-11 Total No. of visits 15

Jan. 9-17-20-23-29 Feb. 7-11.

Is this boiler a duplicate of a previous case. No If so, state vessel's name and report No. -

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c. The drums, headers, tubes and associated fittings for these boilers have been constructed under survey in Bilbao and Zaragoza and the boilers satisfactorily assembled aboard at this port in accordance with the Rules, approved plans and Secretary's letters. The materials and workmanship are good. On completion the boilers were examined under hydraulic pressure of 24.5 Kgs./cm<sup>2</sup> and found sound and tight. Boilers safety valves adjusted under steam and satisfactory accumulation tests carried out. The boilers are in my opinion eligible for Classification with this Society. Certificates for drums and headers herewith.

Survey Fee 6000 pts When applied for 25-3-59

FINAL ERECTION AND TESTING Travelling Expenses (if any) £ When received 19

Date FRIDAY 17 APR 1959

Committee's Minute See Rpt. 1

Engineer Surveyor to Lloyd's Register of Shipping

Lloyd's Register Foundation