

REPORT ON WATER TUBE BOILERS.

No. 946.

6 MAY 1927

Received at London Office

of writing Report 1st May 1927 When handed in at Local Office 19 Port of Bremen

Survey held at Bremen Date, First Survey 9th July 1926 Last Survey 25th April 1927

on the Steamer "BISCAYA" (Number of Visits 7) Gross 6190 Tons

Built at Bremen By whom built Deutscher Schiff- u. Maschinenbau A.G. Werra A.G. Werra When built 1926/27

Lines made at Bremen By whom made — When made 1926/27

Boilers made at — By whom made — When made 1926/27

Registered Horse Power — Owners Bremer Öl-Transport G. M. B. H. Port belonging to Bremen

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel Mannesmann-Röhren-Werke, Düsseldorf

Letter for Record 5 Date of Approval of plan 21/5/26 Number and Description or Type 2 - Babcock & Wilcox

Boilers 2 - Babcock & Wilcox Working Pressure 14 kg/cm² Tested by Hydraulic Pressure to 24 kg/cm² Date of Test 23/2/27

of Certificate — Can each boiler be worked separately Yes Total Heating Surface of Boilers 100 sq. meters

forced draught fitted oil fired Area of fire grate (coal) in each Boiler — Total grate area of boilers in vessel including in and Auxiliary —

No. and type of burners (oil) in each boiler 2 - Vulkan. Type No. and description of safety valves on each boiler 2 - spring loaded Area of each valve 2 x 5026 mm² Pressure to which they are adjusted 14 kg/cm²

Are they fitted with easing gear Yes In case of donkey boilers state whether steam from main boilers can enter the donkey boiler No

Smallest distance between boilers or uptakes and bunkers or woodwork 560 mm. Height of Boiler 4280 mm Width and Length 2565 x 4741 mm

Steam Drums:—Number in each boiler 1 Inside diameter 1300 mm. Material of plates J. M. Steel Thickness 21 mm.

Range of Tensile Strength 44-51 kg/cm² Are drum shell plates welded or flanged No Description of riveting:—

Cir. seams double long. seams double Diameter of rivet holes in long. seams 23 mm. Pitch of Rivets 81 mm.

Width of plate or width of butt straps 230 mm. Thickness of straps 18 mm. Percentage strength of long. joint:—Plate 71.6% Rivet 75.1%

Diameter of tube holes in drum 95 mm. Pitch of tube holes 160 x 195 mm Percentage strength of shell in way of tubes 51.4%

Drum has a flat side state method of staying — Depth and thickness of girders at centre (fitted) —

Distance apart — Number and pitch of stays in each — Working pressure 17.1 kg/cm²

Steam Drum Heads or Ends:—Material J. M. Steel Thickness 20 x 23 mm. Radius or how stayed 1170 mm.

Diameter of Manhole or Handhole 300 x 400 mm. Water Drums:—Number in each boiler 2 Inside diameter 470 mm.

Material of plates J. M. Steel Thickness 19 x 22 mm. Range of tensile strength 41-48 kg/cm² Are drum shell plates welded or flanged Yes

Description of riveting:—Cir. seams single long. seams — Diameter of Rivet Holes in Cir. seams 26 mm. Pitch of rivets 70 mm. Lap of plates or width of butt straps — Thickness of straps —

Percentage strength of long. joint:—Plate — Rivet — Diameter of tube holes in drum 98 x 95 mm. Pitch of tube holes 160 x 140 mm.

Percentage strength of drum shell in way of tubes 51.4% Water Drum Heads or Ends:—Material — Thickness —

Radius or how stayed — Size of manhole or handhole — Headers or Sections:—Number —

Material — Thickness — Tested by Hydraulic Pressure to — Material of Stays —

Area at smallest part — Area supported by each stay — Working Pressure by Rules — Tubes:—Diameter —

Thickness — Number — Steam Dome or Collector:—Description of Joint to Shell —

Percentage strength of Joint — Diameter — Thickness of shell plates — Material —

Description of longitudinal joint — Diameter of Rivet Holes — Pitch of Rivets — Working Pressure of shell —

Rules — Crown or End Plates:—Material — Thickness — How stayed —

SUPERHEATER. Type — Date of Approval of Plan — 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 —

Diameter of Safety Valve — Pressure to which each is adjusted — Is easing gear fitted —

Is a drain cock or valve fitted at lowest point of superheater — Number, diameter, and thickness of tubes —

are Gear. Tubes — Gaskets or joints:—Manhole — Handhole — Handhole plates —

The foregoing is a correct description,
 Denische Schiff- und Maschinenbau A.G. Werra
 Work: Act. Ges. "Werra" Manufacturer.
 Approved 21.5.26
 Is the approved plan of boiler forwarded herewith —
 Total No. of visits 7

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These Boilers have been constructed under special survey in accordance with the approved plan and instructions and in conformity with the Rules. The material used in the construction and the workmanship is good. They are eligible in my opinion to be classed in the Register Book with a load of 199 to. Thickness of adjusting washers of safety valves Port Boiler 15mm 15mm Forward " 16 " 16 "

Survey Fee £ 8 : 8 : When applied for 1st May 1927

Travelling Expenses (if any) £ : : When received 3 June 1927

G. H. C. Kämpf
 Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 13 MAY 1927

