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REPORT ON BOILERS.

18 JAN 1927

Received at London Office

Date of writing Report Jan 3 1927 When handed in at Local Office Jan 10 1927 Port of Trieste

No. in Reg. Book. 80181 Survey held at Venice Date, First Survey May 21 Last Survey Dec 20 1926
on the S.S. Pleias (Number of Visits 9) Tons { Gross 416 Net 194

Master 25 Built at Venice (Mestre) By whom built Soc. Ital. E. Breda Yard No. 20 When built 1926
Engines made at Altona-Ottensen By whom made Ottensener Eisenwerk A.G. Engine No. 1271 When made 1926
Boilers made at Milan By whom made Soc. Ital. E. Breda Boiler No. 9/20 When made 1926
Nominal Horse Power 162 Owners Soc. Ital. E. Breda Port belonging to Venice

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

See also Genoa Report No 9424

Manufacturers of Steel Mannesmannöhrenwerke Abteilung Schulz Krauß (Letter for Record S)

Total Heating Surface of Boilers 125 m² ^{2690-ft²} Is forced draught fitted yes Coal or Oil fired coal

No. and Description of Boilers Two S.E. marine Working Pressure 14.0 Kg/cm²

Tested by hydraulic pressure to 25 Kg Date of test 24.3.26 No. of Certificate 1748176 Can each boiler be worked separately yes

Area of Firegrate in each Boiler 3.42 m² No. and Description of safety valves to each boiler Two improved disc spring loaded

Area of each set of valves per boiler { per Rule 7.80" as fitted 7.81" Pressure to which they are adjusted 14.0 Kg 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 or woodwork 7' Is oil fuel carried in the double bottom under boilers ✓

Smallest distance between shell of boiler and tank top plating no tank Is the bottom of the boiler insulated yes

Largest internal dia. of boilers 3200 mm Length 3250 mm Shell plates: Material steel Tensile strength 47-53 Kg

Thickness 23.5 mm Are the shell plates welded or flanged no Description of riveting: circ. seams { end S.P. lap inter. ✓

Long. seams S.B. strap ribble Diameter of rivet holes in { circ. seams 28 mm long. seams 28 mm Pitch of rivets { 92 mm 182 mm

Percentage of strength of circ. end seams { plate 69.6 rivets 43.5 Percentage of strength of circ. intermediate seam { plate ✓ rivets ✓

Percentage of strength of longitudinal joint { plate 84.6 rivets 103.5 combined 89.9 Working pressure of shell by Rules 14.2 Kg/cm²

Thickness of butt straps { outer 19 mm inner 22 mm No. and Description of Furnaces in each Boiler 2 corrugated

Material steel Tensile strength 41-47 Kg/cm² Smallest outside diameter 978 mm

Length of plain part { top ✓ bottom ✓ Thickness of plates { crown 14 mm bottom ✓ Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.e. bottom none Working pressure of furnace by Rules 14 Kg

End plates in steam space: Material steel Tensile strength 41-47 Kg Thickness 25 mm Pitch of stays 400 mm

How are stays secured double nut and inset washers Working pressure by Rules 14.9 Kg

Tube plates: Material { front steel back ✓ Tensile strength { 41-47 Kg Thickness { 27 mm 20 mm

Lean pitch of stay tubes in nests 198 mm Pitch across wide water spaces 360 mm Working pressure { front 17.4 Kg back 16.5 Kg

Girders to combustion chamber tops: Material steel Tensile strength 44-55 Kg/cm² Depth and thickness of girder

centre 190x14 mm x 2 Length as per Rule 720 mm Distance apart 200 mm No. and pitch of stays

each two 200 mm Working pressure by Rules 14 Kg Combustion chamber plates: Material steel

Tensile strength 41-47 Kg/cm² Thickness: Sides 17 mm Back 17 mm Top 17 mm Bottom 17 mm

Pitch of stays to ditto: Sides 200x200 mm Back 190x185 mm Top 200x200 mm Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 14 Kg/cm² Front plate at bottom: Material steel Tensile strength 41-47 Kg/cm²

Thickness 27 mm Lower back plate: Material steel Tensile strength 41-47 Kg/cm² Thickness 25 mm

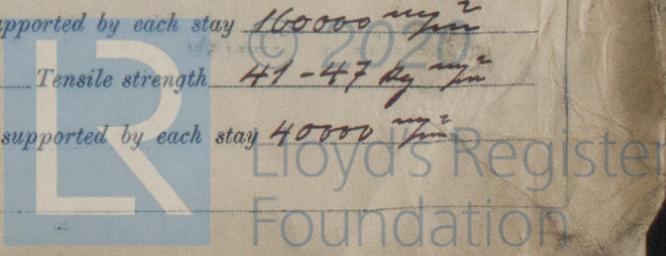
Pitch of stays at wide water space 390 mm Are stays fitted with nuts or riveted over nuts

Working Pressure 19.3 Kg/cm² Main stays: Material steel Tensile strength 44-50 Kg/cm²

Diameter { At body of stay 80 mm or Over threads ✓ No. of threads per inch 6 Area supported by each stay 16000 mm²

Working pressure by Rules 21.9 Kg/cm² Screw stays: Material steel Tensile strength 41-47 Kg/cm²

Diameter { At turned off part ✓ or Over threads 38.1 mm No. of threads per inch 9 Area supported by each stay 4000 mm²



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Working pressure by Rules 14.3 kg Are the stays drilled at the outer ends no Margin stays: Diameter ^{At turned off part, 1/} 47.6 mm
 No. of threads per inch 9 Area supported by each stay 40000 mm² Working pressure by Rules 24.2 kg cm²
 Tubes: Material Steel External diameter ^{Plain 76 mm} _{Stay 76 mm} Thickness ^{4 mm} _{7, 8.5, 11 mm} No. of threads per inch 9
 Pitch of tubes 99 x 99 mm Working pressure by Rules 17.5 kg cm² Manhole compensation: Size of opening
 shell plate 400 x 300 mm Section of compensating ring 225 x 20.5 mm No. of rivets and diameter of rivet holes 30 @ 28 mm
 Outer row rivet pitch at ends 170 mm Depth of flange if manhole flanged 1/ Steam Dome: Material none
 Tensile strength _____ Thickness of shell _____ Description of longitudinal joint _____
 Diameter of rivet holes _____ Pitch of rivets _____ Percentage of strength of joint ^{Plate} _{Rivets} _____
 Internal diameter _____ Working pressure by Rules _____ Thickness of crown _____ No. and diameter
 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 ^{Tubes} _{Steel castings} _____
 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 of
 Rules _____ Pressure to which the safety valves are adjusted _____ Hydraulic test pres
 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 _____

The foregoing is a correct description,

 Manufacturer

Dates of Survey ^{During progress of work in shops - -} _{while building} ^{During erection on board vessel - - -} 1926 May 21, June 17, Aug 18, Sep 21, 22, Oct 30, Nov 15, Dec 16, 20,
 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) 4.6.25
 Total No. of visits nine

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) See also Guroa Report No 94
These Boilers have been made at Milan under special survey and satisfactorily fitted on board the vessel by Lautice Breda at Mestre. The boiler has been examined under steam and found in order.

Survey Fee See Massey Rpt When applied for, 192
 Travelling Expenses (if any) See Rpt 9424 When received, 192

J. J. Sparice
 Engineer Surveyor to Lloyd's Register of Ships

Committee's Minute FRI. 21 JAN 1927
 Assigned See Rpt attached

