

REPORT ON BOILERS.

No. 13112

Date of writing Report 4th Nov 1947 When handed in at Local Office 4th Nov 1947 Received at London Office 10 NOV 1947
 Port of TRIESTE
 No. in Reg. Book. 1750 Survey held at TRIESTE Date, First Survey Dec 1929 Last Survey 192
 on the S.S. "DIANA" (Number of Visits 1) Tons { Gross 3347 Net 1929
 Master Built at PALERMO By whom built CANT. RIVNITI NAVALE Yard No. When built 1923
 Engines made at TRIESTE By whom made CANT. RIVNITI DEL ADRIATICO Engine No. When made 1947
 Boilers made at PALERMO By whom made CANT. RIVNITI NAVALE Boiler No. When made 1923
 Nominal Horse Power 463 Owners ADRIATICO S.A. DI NAV. Port belonging to VENICE

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel (5255 for 3600 + 500 for 3500) (Letter for Record S ✓)
 Total Heating Surface of Boilers 5755 (INC. SUPHR.) Is forced draught fitted YES ✓ Coal or Oil fired OIL ✓
 No. and Description of Boilers 3 CYL. SMOKE TUBE Working Pressure 185 LB/0"
 Tested by hydraulic pressure to 213 LB/0" Date of test 26/7/47 No. of Certificate Can each boiler be worked separately YES ✓
 Area of firegrate in each Boiler No. and Description of safety valves to each boiler 2-3" DIA SPRING LOADED
 Area of each set of valves per boiler { per Rule 11.00" as fitted 14.00" Pressure to which they are adjusted 190 LB/0" 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~~ 18" Locally Is oil fuel carried in the double bottom under boilers YES ✓
 Smallest distance between shell of boiler and tank top plating 17" Is the bottom of the boiler insulated NO
 Largest internal dia. of boilers 3830 mm Length 3500 mm Shell plates: Material S Tensile strength 44 Kgs/mm²
 Thickness 28 mm Are the shell plates welded or flanged NO ✓ Description of riveting: circ. seams { end O.R. inter.
 Long seams T.R. D.B.S. Diameter of rivet holes in { circ. seams 31 mm long seams 31 mm Pitch of rivets { 84 mm 336 mm ✓
 Percentage of strength of circ. end seams { plate 63 rivets 62 Percentage of strength of circ. intermediate seam { plate rivets
 Percentage of strength of longitudinal joint { plate 91 rivets 87.4 combined 93.8 Working pressure of shell by Rules 191 LB/0"
 Thickness of butt straps { outer 24 inner 24 No. and Description of Furnaces in each Boiler 2 - CORRUGATED
 Material S Tensile strength 40 Kgs/mm² Smallest outside diameter 1173 mm
 Length of plain part { top bottom Thickness of plates { crown 15 mm bottom Description of longitudinal joint FIRE WELD ✓
 Dimensions of stiffening rings on furnace or c.c. bottom NONE ✓ Working pressure of furnace by Rules APP.
 End plates in steam space: Material S Tensile strength 41 Kgs/mm² Thickness 27 mm Pitch of stays 380x440 mm
 How are stays secured NUTS IN & OUT ✓ Working pressure by Rules APP.
 Tube plates: Material { front S back S Tensile strength { 40 Kgs/mm² Thickness { 21 mm 19 mm ✓
 Mean pitch of stay tubes in nests 198 mm Pitch across wide water spaces 338 mm Working pressure { front APP. back
 Girders to combustion chamber tops: Material S Tensile strength 44 Kgs/mm² Depth and thickness of girder
 at centre 200x19x2 mm Length as per Rule 767 mm Distance apart 190 mm No. and pitch of stays
 at each 3-170 mm Working pressure by Rules APP. Combustion chamber plates: Material S
 Tensile strength 40 Kgs/mm² Thickness: Sides 14 mm Back 14 mm Top 14 mm Bottom 20 mm ✓
 Pitch of stays to ditto: Sides 170x180 Back 180x180 Top 170x190 Are stays fitted with nuts or riveted over NUTS ✓
 Working pressure by Rules APP. Front plate at bottom: Material S Tensile strength 41 Kgs/mm²
 Thickness 21 mm Lower back plate: Material S Tensile strength 41 Kgs/mm² Thickness 21 mm ✓
 Pitch of stays at wide water space 358 mm Are stays fitted with nuts or riveted over NUTS ✓
 Working Pressure APP. Main stays: Material S Tensile strength 44 Kgs/mm²
 Diameter { At body of stay, 68 mm or No. of threads per inch 10 ✓ Area supported by each stay 380x440
 Over threads Screw stays: Material S Tensile strength 40 Kgs/mm² ✓
 Working pressure by Rules APP. Diameter { At turned off part, 43 32 mm or No. of threads per inch 11 ✓ Area supported by each stay 180x170
 Over threads

Working pressure by Rules APP Are the stays drilled at the outer ends No ✓ Margin stays: Diameter { At turned off part, 42 ^m or Over threads. 42 ^m

No. of threads per inch 11 ✓ Area supported by each stay 269x180 ^m Working pressure by Rules APP

Tubes; Material _____ External diameter { Plain 63.5 ^m ✓ Stay 63.5 ^m Thickness { 9 L.S.G. ✓ No. of threads per inch 11

Pitch of tubes 88x88 ^m ✓ Working pressure by Rules APP Manhole compensation: Size of opening in shell plate 430x330 ^m Section of compensating ring 568x23 No. of rivets and diameter of rivet holes 44-26 ^m

Outer row rivet pitch at ends 110 ^m Depth of flange if manhole flanged _____ Steam Dome: Material _____

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 of stays _____

How connected to shell _____ Inner radius of crown _____ Working pressure by Rules _____

Size of doubling plate under dome _____ Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell _____

Type of Superheater SMOKE TUBE Manufacturers of { Tubes _____ Steel castings _____

Number of elements 192 Material of tubes STEEL Internal diameter and thickness of tubes 13 ^m ✓ - 2.5 ^m ✓

Material of headers S Tensile strength 46 Kg/cm² Thickness 20 ^m ✓ Can the superheater be shut off and the boiler be worked separately YES ✓ Is a safety valve fitted to every part of the superheater which can be shut off from the boiler YES ✓

Area of each safety valve 40 ^m DIA. ✓ Are the safety valves fitted with easing gear YES ✓ Working pressure as per Rules APP Pressure to which the safety valves are adjusted 190 LB/0" ✓ Hydraulic test pressure: tubes IN PLACE , castings 555 LB/0" and after assembly in place 280 LB/0" Are drain cocks or valves fitted to free the superheater from water where necessary YES ✓

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with YES ✓

The foregoing is a correct description,

Manufacturer.

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

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

Total No. of visits

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

These boilers were constructed in 1923 under the inspection of the Registro Italiano. They have now been opened up examined, tested by hydraulic pressure to 213 lb/0" and found in order. The Reentlings have been checked with the approved plan and the materials and workmanship appear good. Superheaters and an oil fuel burning installation have now been fitted.

In my opinion the boilers are eligible to be classed with record of

3 S.B. (SPR.) F.D. 185 LBS.

FITTED FOR OIL FUEL 10,47 (F.P. ABOVE 150°F)

Survey Fee See Letter

Travelling Expenses (if any) £ : :

When applied for, 192

When received, 192

John McFarlane

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute 19 DEC 1947

Assigned See F.E. Mch. rpt.



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