

# REPORT ON BOILERS.

No. 17044.

Received at London Office

7061.1326

14 NOV 1927

Date of writing Report 4<sup>th</sup> Oct 1926 When handed in at Local Office

Port of HAMBURG

No. in Survey held at HAMBURG Date, First Survey 6<sup>th</sup> July 1926 Last Survey 22<sup>nd</sup> Sept. 1926

Reg. Book. on the Four vertical DONKEY BOILERS (Number of Visits 7) Tons Gross Net

uilt at Naples By whom built Cantieri d Base Yard No. When built

ines made at Trieste By whom made S.T. Engine No. 5101-5110 When made

oilers made at HAMBURG By whom made DEUTSCHE WERFT A.G. Boiler Nos 236/39 When made 1926

for the order of Messrs STABILIMENTO-TECHNICO-TRIESINO Port belonging to TRIESTE

## VERTICAL DONKEY BOILER.

ade at Hamburg By whom made Deutsche Werft A.G. Boiler No. 236/39 When made 1926 Where fixed

Manufacturers of Steel Messrs Gutehoffnungshütte of Oberhausen

Total Heating Surface of Boiler 15 m<sup>2</sup> Is forced draught fitted Coal or Oil fired oil fired

No. and Description of Boilers 4 vertical Multitubular Donkey Boilers Working pressure 100 lbs = 7 kg/cm<sup>2</sup>

Tested by hydraulic pressure to 200 lbs = 14 kg/cm<sup>2</sup> Date of test 13<sup>th</sup> & 17<sup>th</sup> September 1926 No. of Certificate 442/445

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler two spring loaded

Area of each set of valves per boiler per rule 1134 mm<sup>2</sup> as fitted 1134 mm<sup>2</sup> Pressure to which they are adjusted Are they fitted with easing gear yes

State whether steam from main boilers can enter the donkey boiler Smallest distance between boiler or uptake and bunkers

Is oil fuel carried in the double bottom under boiler Smallest distance between base of boiler and tank top plating

Is the base of the boiler insulated Largest internal dia. of boiler 1200 mm Height 2650 mm

Shell plates: Material steel Tensile strength 34-41 kg Thickness 9 mm

Are the shell plates welded or flanged flanged Description of riveting: circ. seams end by single long. seams by double

Dia. of rivet holes in circ. seams 20 mm Pitch of rivets 49 mm Percentage of strength of circ. seams plate 59% rivets 64% of Longitudinal joint plate 69% rivets 92% combined

Working pressure of shell by rules 8.4 kg/cm<sup>2</sup> Thickness of butt straps outer inner

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat dished partial spherical Material steel

Tensile strength 34-41 kg Thickness 12.5 mm Radius 1200 mm Working pressure by rules 8.3 kg/cm<sup>2</sup>

Description of Furnace: Plain, spherical, or dished crown partial spherical Material steel Tensile strength 34-41 kg

Thickness 16.5 mm External diameter top 900 mm bottom 1000 mm Length as per rule 950 mm Working pressure by rules 8.8 kg/cm<sup>2</sup>

Pitch of support stays circumferentially and vertically Are stays fitted with nuts or riveted over

Diameter of stays over thread Radius of spherical or dished furnace crown 1200 mm Working pressure by rule 8.6 kg/cm<sup>2</sup>

Thickness of Ogee Ring 12 mm Diameter as per rule D 1200 d 1000 Working pressure by rule 7.8 kg/cm<sup>2</sup>

Combustion Chamber: Material steel Tensile strength 34-41 Thickness of top plate 16.5 mm

Radius if dished 1200 Working pressure by rule Thickness of back plate 12 mm Diameter if circular 900 x 1000

Length as per rule 950 Pitch of stays Are stays fitted with nuts or riveted over

Diameter of stays over thread Working pressure of back plate by rules

Tube Plates: Material front steel back steel Tensile strength 34-41 kg Thickness 18 mm Mean pitch of stay tubes in nests 340 x 170 mm

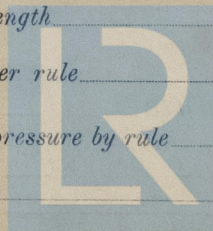
If comprising shell, Dia. as per rule front 900 mm Pitch in outer vertical rows 65 mm Dia. of tube holes FRONT stay 67 mm plain 65 mm BACK stay 67.6 mm plain 65 mm

Is each alternate tube in outer vertical rows a stay tube Working pressure by rules front 8.2 kg/cm<sup>2</sup> back 8.2 kg/cm<sup>2</sup>

Girders to combustion chamber tops: Material Tensile strength

Depth and thickness of girder at centre Length as per rule

Distance apart No. and pitch of stays in each Working pressure by rule



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008322-008332-0260



Crown stays: Material ☒ Tensile strength ☒ Diameter { at body of stay, or over threads ☒

No. of threads per inch ☒ Area supported by each stay ☒ Working pressure by rules ☒

Screw stays: Material ☒ Tensile strength ☒ Diameter { at turned off part, or over threads ☒ No. of threads per inch ☒

Area supported by each stay ☒ Working pressure by rules ☒ Are the stays drilled at the outer ends ☒

Tubes: Material *mild steel random drawn* External diameter { plain *63.5 mm* stay *63.5 mm* Thickness { *3 mm* *8 mm*

No. of threads per inch *10* Pitch of tubes *85 mm* Working pressure by rules *9 kg*

Manhole Compensation: Size of opening in shell plate *380/380 mm* Section of compensating ring *670 x 570* No. of rivets and diameter of rivet holes *28 rivets of 20 mm* Outer row rivet pitch at ends *125 mm* Depth of flange if manhole flanged ☒

Uptake: External diameter ☒ Thickness of uptake plate ☒

Cross Tubes: No. ☒ External diameters { ☒ Thickness of plates ☒

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with *yes*

The foregoing is a correct description,  
**DEUTSCHE WERTT**  
 AKTIENGESELLSCHAFT  
*Munich* Manufacturer.

Dates of Survey { During progress of work in shops - *6/7.26, 19/7.26, 17/8.26, 31/8.26, 13/9.26, 17/9.26, 22/9.26* Is the approved plan of boiler forwarded herewith *yes*  
 while building { During erection on board vessel - ☒ (If not state date of approval.)  
 Total No. of visits *7*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *These four Donkey Boilers have been built under Special Survey in accordance with the approved plan, the Secretary's letter E 29. 3. 26 and otherwise in conformity with the requirements of the Rules, and the materials and workmanship are of good quality. The materials used in the construction are made at works recognized by the Committee and tested in accordance with the Rules by the Society's Surveyors. When tested by hydraulic pressure to 200 lbs per sq. inch these Donkey Boilers were found to be tight and sound in every respect and showed no signs of weakness. They are eligible in my opinion for notification of N.T.B. when examined under steam and their safety valves have been adjusted to 100 lbs of pressure.*

Marks on Boilers:

No 236. Orazio	Fusiyama	No 238. Orazio	Himalaya.
No 442	No 443	No 444	No 445
Lloyd's Test	Lloyd's Test	Lloyd's Test	Lloyd's Test
200 lbs	200 lbs	200 lbs	200 lbs
WP 100	WP 100	WP 100	WP 100
A.C. 13. 9. 26	A.C. 13. 9. 26	A.C. 17. 9. 26	A.C. 17. 9. 26

↑  
**ORAZIO**  
*W.L.*

↑  
**ORAZIO**  
*W.L.*

Survey Fee ... £ *16: 16: -* When applied for, *5. 8. 26*  
 Travelling Expenses (if any) £ *1: 10: -* When received, *25. 10. 26*

Committee's Minute

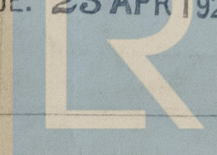
Assigned

FRI. 18 NOV 1927

*See Gen. P. 674 attached*  
*W.L.*

*A. Carstensen*  
 Engineer Surveyor to Lloyd's Register of Shipping.

TUE. 23 APR 1929



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