

# REPORT ON BOILERS.

No. 16726

8 - MAR 1926

Received at London Office

Port of **HAMBURG**Date of writing Report **12<sup>th</sup> FEBR. 1926** When handed in at Local Office **6.3.26**Date, First Survey **10<sup>th</sup> MARCH 1925** Last Survey **12<sup>th</sup> FEBRUARY 1926**No. in  
Reg. Book.Survey held at **KIEL**  
on the **Steel Twin Sc. Motor V. "MONTROLITE"**(Number of Visits **11**)  
Gross **11309**  
Tons **Net 6668**Built at **KIEL** By whom built **FRIED. KRUPP-GERMANIAWERFT AG** Yard No. **480** When built **1926**Engines made at **KIEL** By whom made **FRIED. KRUPP-GERMANIAWERFT AG** Engine No. **1933** When made **1926**Boilers made at **KIEL** By whom made **FRIED. KRUPP-GERMANIAWERFT AG** Boiler No. **3643** When made **1926**Owners **IMPERIAL OIL LD.** Port belonging to **TORONTO**

## VERTICAL DONKEY BOILER.

Made at **Kiel** By whom made **Fried. Krupp-Germania-Werft** Boiler No. **3643** When made **1926** Where fixed **stowed compartment**Manufacturers of Steel **Naummann-Petersen Werke - Düsseldorf** Is forced draught fitted **yes** Coal or Oil fired **oil fired**Total Heating Surface of Boiler **2690 sq. m.** Working pressure **71 lbs.**No. and Description of Boilers **1 Vertical Donkey boiler for Heating Purposes** No. of Certificate **385**Tested by hydraulic pressure to **142 lbs.** Date of test **15.6.25**Area of Firegrate in each Boiler **2690 sq. m.** No. and Description of safety valves to each boiler **2 spring loaded**Area of each set of valves per boiler **2690 sq. m.** Pressure to which they are adjusted **71 lbs.** Are they fitted with easing gear **yes**State whether steam from **W.T.** boilers can enter the donkey boiler **no** non return valve fitted **yes** Smallest distance between boiler or uptake and bunkersIs oil fuel carried in the double bottom under boiler **no** Smallest distance between base of boiler and tank top platingIs the base of the boiler insulated **yes** Largest internal dia. of boiler **1350 mm** Height **3573 mm**Shell plates: Material **Steel** Tensile strength **44-50 kg/cm<sup>2</sup>** Thickness **11 mm**Are the shell plates welded or flanged **flanged** Description of riveting: circ. seams **top: 1/2 single, bottom: 1/2 double** long. seams **1/2 also riveted**Dia. of rivet holes in **circ. seams: 24 mm, long. seams: 22 mm** Pitch of rivets **78 mm** Percentage of strength of circ. seams **plate: 60.6%, rivets: 55.2%, combined: 76.6%** of Longitudinal joint **plate: 68.8%, rivets: 31.2%, combined: 76.6%**Working pressure of shell by rules **8.5 kg/cm<sup>2</sup>** Thickness of butt straps **outer: 11 mm, inner: 11 mm**Shell Crown: Whether complete hemisphere, dished partial spherical, or flat **dished partial spherical** Material **Steel**Tensile strength **44 kg/cm<sup>2</sup>** Thickness **11 mm** Radius **1350 mm** Working pressure by rules **8.58 kg/cm<sup>2</sup>**Description of Furnace: Plain, spherical, or dished crown **Plain with dished crown** Material **Steel** Tensile strength **44 kg/cm<sup>2</sup>**Thickness **13 mm** External diameter **top: 1470 mm, bottom: 1190 mm** Length as per rule **745 mm** Working pressure by rules **8.62 kg/cm<sup>2</sup>**Pitch of support stays circumferentially **and vertically** Are stays fitted with nuts or riveted over **yes** Working pressure by rule **7.44 kg/cm<sup>2</sup>**Diameter of stays over thread **13 mm** Radius of spherical or dished furnace crown **1100 mm** Working pressure by rule **6.96 kg/cm<sup>2</sup>**Thickness of Ogee Ring **13 mm** Diameter as per rule **1350 mm** Working pressure by rule **6.96 kg/cm<sup>2</sup>**Combustion Chamber: Material **Steel** Tensile strength **44 kg/cm<sup>2</sup>** Thickness of top plate **14 mm**Radius if dished **1100 mm** Working pressure by rule **10.6 kg/cm<sup>2</sup>** Thickness of back plate **13 mm** Diameter if circular **1074 mm**Length as per rule **1240 mm** Pitch of stays **182 x 320 mm** Are stays fitted with nuts or riveted over **riveted over**Diameter of stays over thread **37.9 mm** Working pressure of back plate by rules **7.66 kg/cm<sup>2</sup>**Tube Plates: Material **Steel** Tensile strength **44-47 kg/cm<sup>2</sup>** Thickness **18 mm** Mean pitch of stay tubes in nests **270 mm**If comprising shell, Dia. as per rule **front: 1360 mm, back: 1360 mm** Pitch in outer vertical rows **270 mm** Dia. of tube holes **FRONT: stay 65.75 mm, plain 65 mm, BACK: stay 59.6 mm, plain 63.5 mm**Is each alternate tube in outer vertical rows a stay tube **no** Working pressure by rules **front: 10.1 kg/cm<sup>2</sup>, back: 10.7 kg/cm<sup>2</sup>**Girders to combustion chamber tops: Material **Steel** Length as per rule **1350 mm**Depth and thickness of girder at centre **1350 mm** Working pressure by rule **10.1 kg/cm<sup>2</sup>**Distance apart **1350 mm** No. and pitch of stays in each **1350 mm**Tensile strength **10.1 kg/cm<sup>2</sup>**Working pressure by rule **10.1 kg/cm<sup>2</sup>**No. and pitch of stays in each **1350 mm**Working pressure by rule **10.1 kg/cm<sup>2</sup>**



GENERAL REMARKS—(The Surveyor should state the Number of Report and Name of any Sister Vessel.  
the Plans should be embodied.)  
*All steel material*

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Crown stays: Material \_\_\_\_\_ Tensile strength \_\_\_\_\_ Diameter { at body of stay, or over threads \_\_\_\_\_ Working pressure by rules \_\_\_\_\_  
No. of threads per inch \_\_\_\_\_ Area supported by each stay \_\_\_\_\_  
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 *Laurel mild steel* ✓ External diameter { plain *63.5 mm* ✓ Thickness { *3 mm* ✓  
No. of threads per inch *9* ✓ Pitch of tubes *90 mm* ✓ Working pressure by rules *9 kg/cm<sup>2</sup>*  
Manhole Compensation: Size of opening in shell plate *300 x 400 mm* Section of compensating ring \_\_\_\_\_ No. of rivets and diameter \_\_\_\_\_  
of rivet holes \_\_\_\_\_ Outer row rivet pitch at ends \_\_\_\_\_ Depth of flange if manhole flanged *85 mm*  
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,

**FRIED. KRUPP  
GERMANIAWERKE**

Manufacturer.

Dates of Survey { During progress of work in shops - *10/3 - 15/5 - 22/5 - 28/6 - 15/6/25*  
while building { During erection on board vessel - *5/2/26 - 12/1 - 15/1 - 17/1 - 5/2 - 12/2/26*

Is the approved plan of boiler forwarded herewith *Yes* *Ex 16376*  
(If not state date of approval.)

Total No. of visits *11*

GENERAL REMARKS. (State quality of workmanship, opinions as to class, &c.) *Material & workmanship of this Donkey boiler are of good quality. The materials used in the construction are made at works recognized by the Committee and tested by the Society's Surveyors in accordance with the Rules. This Donkey boiler has been made in accordance with the approved plan, the Surveyor's letter and then in conformity with the requirements of the Rules and was found to be light and sound in steam in every respect and is eligible in my opinion for record 'N. T. B-26'*

## MARK ON BOILER

*N. T. B. 26*  
*LLOYD'S TEST*  
*142 lbs.*  
*W.P. 74 lbs.*  
*W.P. 75.6 lbs.*

## THICKNESS OF PLATES

Port: *18 mm* Stb: *19.5 mm*

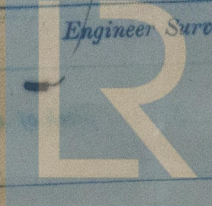
Survey Fee £ *4* : *4* :  
Travelling Expenses (if any) £ : :  
When applied for, *17<sup>th</sup> February 1926*  
When received, *12/3/26*

FRI. 19 MAR 1926

Committee's Minute  
Assigned

*See St. 2 pt attached*

Engineer Surveyor to Lloyd's Register of Shipping.



Lloyd's Register  
Foundation