

# REPORT ON BOILERS.

No. 172/11

28 DEC 1926

Received at London Office

Date of writing Report 20<sup>th</sup> Dec. 1926. When handed in at Local Office 19 Port of HAMBURG.

No. in Reg. Book 70317 Survey held at KIEL Date, First Survey 8<sup>th</sup> June. Last Survey 21<sup>st</sup> Dec. 1926.

on the Steel Twin Sc. "G. HARRISON SMITH" (Number of Visits 7) Tons Gross 1537  
Net 9326

Built at SPARROWS POINT. By whom built BETHLEHEM S.B. CORR, LD. Yard No. \_\_\_\_\_ When built 1921

Engines made at SHIP WILL BE CONVERTED TO MOTOR SHIP By whom made ERETZER VULCAN Engine No. \_\_\_\_\_ When made 1926

Boilers made at \_\_\_\_\_ By whom made \_\_\_\_\_ Boiler No. \_\_\_\_\_ When made \_\_\_\_\_

Owners INTERNATIONAL PETROLEUM CO. LD. Port belonging to HALIFAX N.S.

## VERTICAL DONKEY BOILER.

Made at Kiel By whom made Fried. Knapp-Germania Boiler No. 3688 When made 1926 Where fixed \_\_\_\_\_

Manufacturers of Steel Messrs. Henschel & Sohn - Kattingen.

Total Heating Surface of Boiler 23.22 sq. m. Is forced draught fitted \_\_\_\_\_ Coal or Oil fired oil

No. and Description of Boilers 1 Vertical Donkey Boiler for Heating Purposes. Working pressure 7 kg. (100 lbs)

Tested by hydraulic pressure to 200 lbs. Date of test 3. 8. 26. No. of Certificate 439.

Area of Firegrate in each Boiler \_\_\_\_\_ No. and Description of safety valves to each boiler \_\_\_\_\_

Area of each set of valves per boiler per rule 24.32 sq. m. Pressure to which they are adjusted \_\_\_\_\_ Are they fitted with easing gear \_\_\_\_\_

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

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 1350 mm. Height 3378 mm.

Shell plates: Material Steel Tensile strength 44-50 kg. Thickness 11 mm.

Are the shell plates welded or flanged flanged Description of riveting: circ. seams top: 60 single  
inter: 40 mm. 60 double. long. seams 60 double

Dia. of rivet holes in circ. seams 24-22 mm. long. seams 22 mm. Pitch of rivets 61-78 mm. Percentage of strength of circ. seams plate: 62.3% bottom: 71.8%  
rivets: 55.1% of Longitudinal joint 72.5% plate: 68.8%  
rivets: 80.8% combined: \_\_\_\_\_

Working pressure of shell by rules 10.25 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 41 kg. Thickness 15 mm. Radius 1350 mm. Working pressure by rules 7.1 kg.

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

Thickness nom 15 mm - 13 mm External diameter top: 1100 mm. bottom: 1264 mm. Length as per rule 1075 mm. Working pressure by rules 8.3 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 1100 mm. Working pressure by rule 8 kg/cm<sup>2</sup>

Thickness of Ogee Ring \_\_\_\_\_ Diameter as per rule D: \_\_\_\_\_ d: \_\_\_\_\_ Working pressure by rule \_\_\_\_\_

Combustion Chamber: Material Steel Tensile strength 34-41 kg. Thickness of top plate 15 mm.

Radius if dished 1100 mm. Working pressure by rule 8 kg. Thickness of back plate 13 mm. Diameter if circular 1074 mm.

Length as per rule 1060 mm. Pitch of stays 320 x 180 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 kg/cm<sup>2</sup>

Tube Plates: Material Steel Tensile strength 34-41 kg. Thickness 18 mm. Mean pitch of stay tubes in nests 270 mm.

If comprising shell, Dia. as per rule front: 1200 mm. back: \_\_\_\_\_ Pitch in outer vertical rows 90 mm. Dia. of tube holes FRONT stay: 65.7 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: 11.13 kg/cm<sup>2</sup>  
back: 11.13 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 \_\_\_\_\_



**Crown stays:** Material Steel Tensile strength 41-47 kg Diameter at body of stay, 34.29 mm  
 No. of threads per inch 9 Area supported by each stay 182 x 320 mm Working pressure by rules 7 kg  
**Screw stays:** Material Steel Tensile strength 41-47 kg Diameter at turned off part, 34.29 mm  
 No. of threads per inch 9 Area supported by each stay 182 x 320 mm Working pressure by rules 7 kg Are the stays drilled at the outer ends no  
**Tubes:** Material Stainless mild steel External diameter plain 63.5 mm Thickness 3 mm  
 No. of threads per inch 9 Pitch of tubes 90 x 90 mm Working pressure by rules 9 kg  
**Manhole Compensation:** Size of opening in <sup>cover</sup> plate 300 x 400 mm Section of compensating ring 100 mm No. rivets and diameter 100 mm  
 of rivet holes 100 mm Outer row rivet pitch at ends 100 mm Depth of flange if manhole flanged 100 mm  
**Uptake:** External diameter 100 mm Thickness of uptake plate 10 mm  
**Cross Tubes:** No. 1 External diameters 100 mm Thickness of plates 10 mm

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

**FRI  
GERMANY**

The foregoing is a correct statement

*Friedrich Witt*  
Manufacturer.

Dates of Survey 8/6-11/6-18/6-28/7-3/8-3/9-21/12/26  
 During progress of work in shops - -  
 while building During erection on board vessel - -

Is the approved plan of boiler forwarded to the Registrar Yes  
 (If not state date of approval)

Total No. of visits 7

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

*Heating Donkey boiler are of good quality. The materials used in the construction are made at works recognized by the Committee and approved by the Surveyors. This Donkey has been built under Special Survey with the approved plan, the Secretary's Letter and other documents in the Rules and is eligible in my opinion for record of 23 feet to satisfactory completion on board.*

*This Donkey boiler has been shipped to Yegorov and is fitted on board.*

Survey Fee ... .. £ 4 : 4 : - When applied for, 23. 12. 19 26

Travelling Expenses (if any) £ - : - : - When received, 28. 1. 19 27

*Friedrich Witt*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **TUES. 6 MAR 1928**

Assigned Not for Classing Committee See Bureau of Lloyd's Register Foundation