

REPORT ON BOILERS.

No. 17211
28 DEC 1926

Received at London Office

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

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

70317 on the Steel Twin Sc. "G. HARRISON SMITH" (Number of Visits 7) Tons { Gross 1537
Net 9326

Built at SPARROW 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 BREMER 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 { end top: 60 single long. seams 60 double

Dia. of rivet holes in { circ. seams 24-22 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 { plate 68.8% rivets 80.8% combined

Working pressure of shell by rules 10.25 kg/cm² 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 from 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/cm²

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/cm²

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/cm²

Tube Plates: Material { front Steel back 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. 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/cm² back 11.13 kg/cm²

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 ✓ Tensile strength ✓ Diameter { at body of stay, ✓
 No. of threads per inch ✓ Area supported by each stay ✓ Working pressure by rules ✓

Screw stays: Material Steel Tensile strength 41-47 kg Diameter { at turned off part, 34.29 mm
 over threads 37.9 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 Standard mild steel External diameter { plain 63.5 mm
 stay 60 mm Thickness { 3 mm
6 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 ^{crown} shell plate 300 x 400 mm Section of compensating ring ✓ No. rivets and diameter ✓

of rivet holes ✓ Outer row rivet pitch at ends ✓ 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 ✓

FRI
GERMANY
The foregoing is a ✓ Manufacturer.

Dates of Survey { During progress of 8/6-11/6-18/6-28/7-3/8-3/9-21/12/26 Is the approved plan of boiler forwarded ✓
 work in shops - - - (If not state date of approval)

while building { During erection on board vessel - - - Total No. of visits 7

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

Heating Donkey Boiler are of good quality. The materials used in the construction are made at Works recognized by the Committee and sent to the Surveyors. This Donkey has been built under Special Supervision with the approved plan, the Secretary's Letter and other documents. The Rules and is eligible in my opinion for second class certificate for satisfactory completion on board.

This Donkey Boiler has been shipped to Yegor and is fitted on board.

Survey Fee £ 4 : 4 : - When applied for, 23.12.1926

Travelling Expenses (if any) £ - : - : - When received, 28.1.1927

Friedrich J. Hill
 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