

# REPORT ON BOILERS.

No. 7961.

15 MAY 1929

Received at London Office

Date of writing Report 3/5 1927. When handed in at Local Office 19 Port of Copenhagen.  
 No. in Survey held at Copenhagen & Odense. Date, First Survey 8/1 Last Survey 27/4 1927.  
 No. in Book 97 on the Swedish S.S. 3rd "Abraham Lincoln" (Number of Visits 11) Gross 5783.53 Tons Net 3603.41  
 Built at Odense. By whom built Odense Haskibsværft as a P. H. Olsen Yard No. 32 When built 1928-9.  
 Engines made at Copenhagen. By whom made As Binnemister & Wain. Engine No. 1516-1517 When made 1928-9.  
 Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓  
 Owners As Bouheir (Fred. Olsen & Co.) Port belonging to Oslo.

## VERTICAL DONKEY BOILER.

Made at Copenhagen. By whom made As Binnemister & Wain Boiler No. 1822 When made 1929. Where fixed in the water room.  
 Manufacturers of Steel Plates: The Steel Co. of Scotland Ltd. Uptake & cross-tubes: Asmus. Gallenways Ltd.  
 Total Heating Surface of Boiler 100 sq. ft. = 9.3 m<sup>2</sup> Is forced draught fitted No. Coal or Oil fired oil fired.  
 Name and Description of Boilers 1 vertical, upright. Working pressure 7 kg/cm<sup>2</sup>  
 Tested by hydraulic pressure to 14 kg/cm<sup>2</sup> Date of test 8/2 1929. No. of Certificate 501.  
 Area of Firegrate in each Boiler ✓ No. and Description of safety valves to each boiler 2 off direct spring loaded, 44 mm dia.  
 Area of each set of valves per boiler { per rule 853 mm<sup>2</sup> } Pressure to which they are adjusted 7 kg/cm<sup>2</sup> Are they fitted with easing gear yes.  
 { as fitted 3040 mm<sup>2</sup> }  
 Whether steam from main boilers can enter the donkey boiler no main boiler Smallest distance between boiler or uptake and bunkers  
 Woodwork ✓ Is oil fuel carried in the double bottom under boiler yes. Smallest distance between base of boiler and tank top plating  
38" Is the base of the boiler insulated No. Largest internal dia. of boiler 1370 mm Height 3200 mm.  
 Shell plates: Material Boiler steel Tensile strength 29 t p. 0" Thickness 10 mm.  
 Are the shell plates welded or flanged No. Description of riveting: circ. seams { end lap, single riv } long. seams lap, 2 1/2 riveted  
 { inter. }  
 of rivet holes in { circ. seams 19.7 mm } Pitch of rivets { 45 mm } Percentage of strength of circ. seams { plate 57.8 } of Longitudinal joint { plate 69.3 }  
 { long. seams 19 mm } { 62 mm } { rivets 49.8 } { rivets 72.2 }  
 { combined. }  
 Working pressure of shell by rules 8.4 kg/cm<sup>2</sup> Thickness of butt straps { outer ✓ }  
 { inner ✓ }  
 Crown: Whether complete hemisphere, dished partial spherical, or flat flat Material steel.  
 Tensile strength 27.2 t Thickness 22 mm Radius ✓ Working pressure by rules 16.85 kg/cm<sup>2</sup>  
 Description of Furnace: Plain, spherical, or dished crown flat Material steel Tensile strength 26.7 t.  
 Thickness 14 mm External diameter { top 1029 mm } Length as per rule 1732 mm Working pressure by rules CROWN: 16.3 kg/cm<sup>2</sup>  
 { bottom 1229 mm } { SHELL: 6.65 }  
 { (CROSS TUBES NOT CONSIDERED) }  
 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 ✓ Working pressure by rule ✓  
 Thickness of Ogee Ring ✓ Diameter as per rule { D ✓ } Working pressure by rule ✓  
 { d ✓ }  
 Combustion Chamber: Material Tensile strength Thickness of top plate  
 Is it dished Working pressure by rule Thickness of back plate Diameter if circular  
 As per rule Pitch of stays Are stays fitted with nuts or riveted over  
 Diameter of stays over thread Working pressure of back plate by rules  
 Plates: Material { front } Tensile strength { } Thickness { } Mean pitch of stay tubes in nests  
 { back }  
 Surprising shell, Dia. as per rule { front } Pitch in outer vertical rows { } Dia. of tube holes FRONT { stay } BACK { stay }  
 { back } { plain } { plain }  
 Does alternate tube in outer vertical rows a stay tube Working pressure by rules { front }  
 { back }  
 Stays to combustion chamber tops: Material Tensile strength  
 Diameter 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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**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 \_\_\_\_\_ External diameter { plain \_\_\_\_\_ stay \_\_\_\_\_ Thickness \_\_\_\_\_

No. of threads per inch \_\_\_\_\_ Pitch of tubes \_\_\_\_\_ Working pressure by rules \_\_\_\_\_

**Manhole Compensation:** Size of opening in shell plate 305 x 405 mm. Section of compensating ring plate flanged. No. of rivets and diameter of rivet holes \_\_\_\_\_ Outer row rivet pitch at ends \_\_\_\_\_ Depth of flange if manhole flanged 75 mm.

**Uptake:** External diameter 364 mm. Thickness of uptake plate 12 mm.

**Cross Tubes:** No. 3 External diameters { 230 mm Thickness of plates 10 mm.

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes.

The foregoing is a correct description,  
**AKTIESELSKABET**  
**BURMEISTER & WAINSKIN- OG SKIBSBYGGERI**  
 Manufacturer \_\_\_\_\_

Dates of Survey { During progress of work in shops - 1929: 8/1 - 12/1 - 28/1 - 4/2 - 8/2. Is the approved plan of boiler forwarded herewith (If not state date of approval.) \_\_\_\_\_

while building { During erection on board vessel - 25/2. 4/3. 16/3. 16/4. 27/4. 27/4 1929. Total No. of visits 11.

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

This docking boiler has been built under Special Survey and in accordance with the Rules the approved plan and the requirements contained in the Surveyor's letter dated 19/10 1928.

The material used for the construction has been tested and examined as per Rules and found good and the workmanship is of good description throughout.

The boiler has been fitted on board the vessel under our supervision and to our satisfaction and a steam driven feed pump, 90 x 60 x 70 mm diameter, and a feed injector have been supplied to feed the boiler.

Recommend the vessel to have notation of DB 7 KG. in the Register Book.

Survey Fee ... .. £ 76.44. When applied for. 13.5.29.

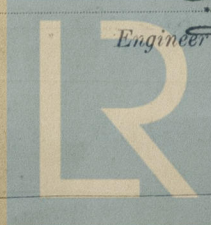
Travelling Expenses (if any) £ : : When received. 25.5.29.

Committee's Minute

Assigned

WED. 22 MAY 1929

*See J.E. rpt. attached*



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