

## REPORT ON BOILERS.

No. 8551.

Received at London Office 27 JUN 1931

Date of writing Report 22<sup>nd</sup> June 1931 When handed in at Local Office 24<sup>th</sup> June 1931 Port of Copenhagen.  
 No. in Reg. Book 91530 Survey held at Nakskov Date, First Survey 20/2 1931 Last Survey 19/6 1931  
 on the Steamer L. Motor vessel Meinwand (Number of Visits 13.) Gross 3113.04 Tons Net 1739.32

Built at Nakskov By whom built 9/5 Nakskov Skibsværft. Yard No. 43 When built 1931  
 Engines made at Copenhagen By whom made 3/5 Birnisk & Wain. Engines No. 1872 When made 1930-1  
 Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓  
 Owners 9/5 Det Østasiatiske Kompagni Port belonging to Copenhagen.

## VERTICAL DONKEY BOILER.

Made at Nakskov By whom made 9/5 Nakskov Skibsværft. Boiler No. 18 When made 1931 Where fixed in the motor room.

Manufacturers of Steel Avesta Jernvarks Aktiebolag, Sweden.

Total Heating Surface of Boiler 100 sq. ft. ✓ Is forced draught fitted No. Coal or Oil fired oil fired ✓

No. and Description of Boilers One off, vertical, crosshatch. Working pressure 100 lbs./sq. in.

Tested by hydraulic pressure to 200 lbs./sq. in. ✓ Date of test 1<sup>st</sup> April 1931. No. of Certificate 535.

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 2 off, direct spring loaded.

Area of each set of valves per boiler { per rule 3534 sq. in. ✓ as fitted 3534 sq. in. ✓ Pressure to which they are adjusted 100 lbs. ✓ Are they fitted with easing gear yes ✓

State whether steam from main boilers can enter the donkey boiler No. main boilers. Smallest distance between boiler or uptake and bunkers

on woodwork 30" ✓ Is oil fuel carried in the double bottom under boiler yes ✓ Smallest distance between base of boiler and tank top plating

41" ✓ Is the base of the boiler insulated yes ✓ Largest internal dia. of boiler 1400 mm. Height 3760 mm.

Shell plates: Material S.H. boiler steel ✓ Tensile strength 44-50 kg/cm<sup>2</sup> ✓ Thickness 9.5 mm. ✓

Are the shell plates welded or flanged No. ✓ Description of riveting: circ. seams { lap, single ✓ end lap, 2 1/2 in. ✓ inter. lap, single ✓ long. seams lap, 2 1/2 in. riveted ✓

Dia. of rivet holes in { circ. seams 20 mm. ✓ Pitch of rivets 50 mm. ✓ Percentage of strength of circ. seams { plate 60 ✓ rivets 57.2 ✓ of Longitudinal joint { plate 67.6 ✓ rivets 88 ✓ combined. ✓

Working pressure of shell by rules 8.28 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 S.H. boiler steel ✓

Tensile strength 41-47 kg/cm<sup>2</sup> ✓ Thickness 13 mm. ✓ Radius 1300 mm. ✓ Working pressure by rules 8.24 kg/cm<sup>2</sup> ✓

Description of Furnace: Plain, spherical, or dished crown dished. ✓ Material S.H. boiler steel ✓ Tensile strength 41-47 kg/cm<sup>2</sup> ✓

Thickness 14 mm. (crown 17 mm.) external diameter { top 1000 mm. ✓ bottom 1200 mm. ✓ Length as per rule 1480 mm. ✓ Working pressure by rules 7.85 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 1300 mm. ✓ Working pressure by rule 7.73 kg/cm<sup>2</sup> ✓

Thickness of Ogee Ring ✓ Diameter as per rule { D ✓ d ✓ Working pressure by rule (upside tube not considered) ✓

Combustion Chamber: Material Tensile strength Thickness of top plate

Radius if dished Working pressure by rule Thickness of back plate Diameter if circular

Length 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

Tube Plates: Material { front Tensile strength Thickness Mean pitch of stay tubes in nests

If comprising shell, Dia. as per rule { front Pitch in outer vertical rows { stay Dia. of tube holes FRONT { stay BACK { stay

Is each alternate tube in outer vertical rows a stay tube Working pressure by rules { front back

Girders to combustion chamber tops: Material Tensile strength Length as per rule Working pressure by rule

Depth and thickness of girder at centre

Distance apart No. and pitch of stays in each

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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 300 x 400 in. Section of compensating ring 50 x 16 in. No. of rivets and diameter of rivet holes 36 of 20 in. Outer row rivet pitch at ends 90 in. Depth of flange if manhole flanged ✓

**Uptake:** External diameter 305 in. Thickness of uptake plate 13 in.

**Cross Tubes:** No. 2 External diameters 230 in. Thickness of plates 13 in.

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

The foregoing is a correct description, **ASTIELSESTADEN NAKSKOV SKIBSVÆRFT** Manufacturer.

Dates { During progress of work in shops - - 20/2. 3/3. 11/3. 18/3. 27/3. 1/4 1931. Is the approved plan of boiler forwarded herewith Yes.  
 of Survey { while building { During erection on board vessel - - 13/4. 1/5. 4/5. 13/5. 28/5. 16/6. 19/6 1931. (If not state date of approval.)  
 Total No. of visits 13.

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

This donkey boiler has been built under special survey and in accordance with the Society's Rules, the approved plan and the requirements contained in the Secretary's letter dated 2/10 30.

The material has been made of a recognized works, tested and examined as required by the Rules and found good, and the workmanship is good.

The donkey boiler has been fitted and connected complete on board the vessel under the supervision and to the satisfaction of the undersigned, and a duplex feed pump, 75 x 50 x 75 in and a feed injector have been fitted in connection therewith.

Recommend the vessel to have notation of D.B. 100 lbs. in the Register Book.

Survey Fee £ 76.44 When applied for 25.6. 1931

Travelling Expenses (if any) £ \_\_\_\_\_ When received 21.7. 1931

Committee's Minute FRI. 3 JUL 1931

Assigned Lee F. E. Rpt.

Ch. Wilkiff. L. L. L. L.  
 Engineer Surveyor to Lloyd's Register of Shipping.