

# REPORT ON BOILERS.

No. 2522

Received at London Office

TUES. 6 AUG 1907

Date of writing Report 31<sup>st</sup> July 1907 When handed in at Local Office 10 Port of Copenhagen  
 No. in Survey held at Copenhagen Date, First Survey 4<sup>th</sup> Sept 06 Last Survey 2<sup>nd</sup> July 1907  
 Reg. Book. 146 on the 4<sup>th</sup> Mt. Bk. "Viking" (Number of Visits 11) Gross 2952 Tons Net 2541  
 Master N. A. Clausen Built at Copenhagen By whom built A. S. Burmeister & Wain's Maskin og Skibsbyggeri When built 1907  
 Engines made at Copenhagen By whom made A. S. Burmeister & Wain's Maskin og Skibsbyggeri when made 1907  
 Boilers made at Copenhagen By whom made A. S. Burmeister & Wain's Maskin og Skibsbyggeri when made 1907  
 Registered Horse Power 146 Owners A. S. Den danske Handelsflaades Skoleskib Port belonging to Copenhagen

## MULTITUBULAR BOILERS—~~MAIN, AUXILIARY OR~~ DONKEY.—Manufacturers of Steel The Glasgow Iron & Steel Co., Furnaces from H. Beardmore

Letter for record S. Total Heating Surface of Boilers 450 sq ft Is forced draft fitted no No. and Description of Boilers One single ended donkey boiler, 2 plain furnaces Working Pressure 100 lbs Tested by hydraulic pressure to 200 lbs Date of test 7<sup>th</sup> Novbr. 1906  
 No. of Certificate 254 Can each boiler be worked separately ✓ Area of fire grate in each boiler 15 sq ft No. and Description of safety valves to each boiler 2 spring loaded Area of each valve 3.1416 sq in Pressure to which they are adjusted 100 lbs  
 Are they fitted with easing gear yes In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler ✓  
 Smallest distance between boilers or uptakes and bunkers or woodwork no bunkers or woodwork Mean dia. of boilers 8'-0<sup>3</sup>/<sub>2</sub>" Length 7'-0"  
 Material of shell plates S. M. Steel Thickness 9/16 + 1/32 Range of tensile strength 27-32 Tons Are the shell plates welded or flanged no  
 Descrip. of riveting: cir. seams Single long. seams Double Diameter of rivet holes in long. seams 1" Pitch of rivets 2<sup>5</sup>/<sub>16</sub>"  
 Gap of plates or width of butt straps 5<sup>1</sup>/<sub>2</sub>" Per centages of strength of longitudinal joint rivets 76.5 Working pressure of shell by rules 100 lbs Size of manhole in shell 16" Size of compensating ring 8" x 1<sup>9</sup>/<sub>32</sub>" No. and Description of Furnaces in each boiler 2 plain Material S. M. Steel Outside diameter 27<sup>7</sup>/<sub>8</sub>" Length of plain part 60<sup>3</sup>/<sub>8</sub>" Thickness of plates 7/16" crown 7/16" bottom 7/16"  
 Description of longitudinal joint welded No. of strengthening rings ✓ Working pressure of furnace by the rules 116.96 lbs Combustion chamber plates: Material S. M. Steel Thickness: Sides 7/16" Back 1/2" Top 7/16" Bottom 5/8" Pitch of stays to ditto: Sides 8" x 6<sup>3</sup>/<sub>4</sub>" Back 7<sup>3</sup>/<sub>4</sub>" x 7<sup>1</sup>/<sub>2</sub>"  
 Top 8" x 6<sup>3</sup>/<sub>4</sub>" If stays are fitted with nuts or riveted heads fasts inside & in boundary runs outside riveted heads remains outside Working pressure by rules 132.5 - back Material of stays S. M. Steel Diameter at smallest part 1" Area supported by each stay 58 sq in Working pressure by rules 110.2 lbs End plates in steam space: Material S. M. Steel Thickness 1<sup>1</sup>/<sub>16</sub>" x 3<sup>3</sup>/<sub>4</sub>"  
 Pitch of stays 16" x 15" How are stays secured Double nuts & doubling plates Working pressure by rules 110.5 lbs Material of stays S. M. Steel Diameter at smallest part 2.134"  
 Area supported by each stay 240 sq in Working pressure by rules 149 lbs Material of Front plates at bottom S. M. Steel Thickness 3/4" Material of Lower back plate S. M. Steel Thickness 1<sup>1</sup>/<sub>16</sub>" Greatest pitch of stays 16.25" x 7.75" Working pressure of plate by rules 101.5 lbs Diameter of tubes 2<sup>3</sup>/<sub>4</sub>"  
 Pitch of tubes 3<sup>3</sup>/<sub>4</sub>" Material of tube plates S. M. Steel Thickness: Front 3/4" Back 5/8" Mean pitch of stays 9<sup>3</sup>/<sub>8</sub>" Pitch across wide water spaces 12<sup>1</sup>/<sub>2</sub>" Working pressures by rules 110.5 lbs Girders to Chamber tops: Material S. M. Steel Depth and thickness of girder at centre 4<sup>1</sup>/<sub>4</sub>" x 5/8" x 2 Length as per rule 20<sup>7</sup>/<sub>16</sub>" Distance apart 8" Number and pitch of Stays in each 2 - 6<sup>3</sup>/<sub>4</sub>"  
 Working pressure by rules 100 lbs Superheater or Steam chest; how connected to boiler flanged Can the superheater be shut off and the boiler worked separately ✓ Diameter 30<sup>3</sup>/<sub>8</sub>" Length 27<sup>1</sup>/<sub>4</sub>" Thickness of shell plates 3/8" Material S. M. Steel Description of longitudinal joint lap, s. riv. Diam. of rivet holes 3/4" Pitch of rivets 1<sup>3</sup>/<sub>4</sub>" Working pressure of shell by rules 147.2 lbs Diameter of flue 30" Material of flue plates S. M. Steel Thickness 3/4"  
 If stiffened with rings no Distance between rings no Working pressure by rules no End plates: Thickness 3/4" How stayed 2 stays 1<sup>3</sup>/<sub>4</sub>"  
 Working pressure of end plates no Area of safety valves to superheater no Are they fitted with easing gear no

BURMEISTER & WAIN'S MASKIN-OG SKIBSBYGGERI  
 KOBENHAVN.  
 The foregoing is a correct description,  
Joan Burmeister Manufacturer.

Dates of Survey 4/9, 15/9, 22/9, 29/9, 22/10, 29/10, 2/11 x 7/11-06 Is the approved plan of boiler forwarded herewith yes  
 while building 23/2, 14/3, 2/7-07 Total No. of visits 11

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c. This steel donkey boiler has been made in accordance with the approved plan, the Secretary's letter dated the 27<sup>th</sup> July 1906 and in other respects as required by the rules. The workmanship is good throughout.

It is submitted that this vessel is eligible for THE RECORD + DB 7-07 100 lbs

Survey Fee ... £ 5 : - : } When applied for, 25/7 1907  
 Travelling Expenses (if any) £ : : : } When received, 26/7 1907

J. J. Somers 7.8.07  
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute WED. 7 AUG 1907

Assigned + DB 7.07



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.