

# REPORT ON BOILERS.

No. 16101

Received at London Office 19.11.24

of writing Report 31<sup>st</sup> Oct. 1924. When handed in at Local Office 192 Port of HAMBURG  
 o. in Survey held at MIEL Date, First Survey 4<sup>th</sup> August. Last Survey 14<sup>th</sup> October 1924.  
 Book on the Steel Sc. Sr. "VENEDIA" (Number of Visits 2) Gross 1150 Tons Net 627.  
 ster Built at MIEL By whom built HOWALDTSWERKE Yard No. 642 When built 1924  
 gines made at MIEL By whom made HOWALDTSWERKE Engine No. 770 When made 1920  
 lers made at MIEL By whom made HOWALDTSWERKE Boiler No. 1396 When made 1924  
 minial Horse Power 113 Owners F/S DAMPEKIBSESELSKABET D.F.K. Port belonging to COPENHAGEN.

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Sarda Colville & Sons Ltd. (Letter for Record S.)  
 24.9. Heating Surface of Boilers 196.4 sq. m. Is forced draught fitted no Coal or Oil fired coal  
 2. and Description of Boilers 2 single ended multitubular. Working Pressure 13 kg. (185 lb.)  
 tested by hydraulic pressure to 370 lb. Date of test 12.9.24 No. of Certificate 354-355 Can each boiler be worked separately yes  
 Area of Firegrate in each Boiler 2.7 sq. m. No. and Description of safety valves to each boiler 2 spring loaded.  
 Area of each set of valves per boiler { per Rule 4275 sq. m. as fitted 5654.8 sq. m. Pressure to which they are adjusted 13 kg. (185 lb.) Are they fitted with easing gear yes  
 In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler no  
 Smallest distance between boilers or uptakes and bunkers 600 mm. Is oil fuel carried in the double bottom under boilers no  
 Smallest distance between shell of boiler and tank top plating 420 mm. Is the bottom of the boiler insulated yes  
 Largest internal dia. of boilers 3300 mm. Length 3200 mm. Shell plates: Material Steel Tensile strength 44-50 kg.  
 Thickness 24 mm. Are the shell plates welded or flanged flanged Description of riveting: circ. seams { end lp. double inter 85 mm  
 Long. seams double butt. Diameter of rivet holes in { circ. seams 26 mm long. seams 26 mm Pitch of rivets { 170 mm  
 Percentage of strength of circ. end seams { plate 69.4 % rivets 46.7 % Percentage of strength of circ. intermediate seam { plate 84.7 % rivets 99.6 %  
 Percentage of strength of longitudinal joint { plate 84.7 % rivets 99.6 % combined 89.3 % Working pressure of shell by Rules 13.2 kg.  
 Thickness of butt straps { outer 22 mm inner 22 mm No. and Description of Furnaces in each Boiler 2. Dighton  
 Material Steel Tensile strength 41-47 kg. Smallest outside diameter 924 mm.  
 Length of plain part { top 12 mm bottom 12 mm Thickness of plates { crown 12 mm bottom 12 mm Description of longitudinal joint welded  
 Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 13.1 kg.  
 End plates in steam space: Material Steel Tensile strength 41-47 kg. Thickness 23.5 mm. Pitch of stays 400 x 400 mm.  
 How are stays secured Rivet washers double nut & washers. Working pressure by Rules 14.75 kg.  
 Tube plates: Material { front Steel back Steel Tensile strength { 41-47 kg. Thickness { 20 mm.  
 Mean pitch of stay tubes in nests 240 mm. Pitch across wide water spaces 370 mm. Working pressure { front 14.3 kg. back 13.35 kg.  
 Girders to combustion chamber tops: Material Steel Tensile strength 41-47 kg. Depth and thickness of girder  
 at centre 180 mm - 2 x 18 mm Length as per Rule 615 mm. Distance apart 200 mm. No. and pitch of stays  
 in each 2 - 200 mm. Working pressure by Rules 19.07 kg. Combustion chamber plates: Material Steel  
 Tensile strength 41-47 kg. Thickness: Sides 16 mm. Back 16.5 mm. Top 16 mm. Bottom 16 mm.  
 Pitch of stays to ditto: Sides 200 x 200 mm. Back 190 x 210 mm. Top 200 x 200 mm. Are stays fitted with nuts or riveted over nuts  
 Working pressure by Rules 15.55 kg. Front plate at bottom: Material Steel Tensile strength 41-47 kg.  
 Thickness 23.5 mm. Lower back plate: Material Steel Tensile strength 41-47 kg. Thickness 23.5 kg.  
 Pitch of stays at wide water space 500 mm. Are stays fitted with nuts or riveted over double nut & washers.  
 Working Pressure 14.15 kg. Main stays: Material Steel Tensile strength 41-47 kg.  
 Diameter { At body of stay, 68 mm. No. of threads per inch 8 Area supported by each stay 400 x 400 mm.  
 { Over threads 73 mm. Working pressure by Rules 13.75 kg. Screw stays: Material Steel Tensile strength 41-47 kg.  
 Diameter { At turned off part, 55 mm. No. of threads per inch 9 Area supported by each stay 190 x 220 mm.  
 { Over threads 41 mm.



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Working pressure by Rules 14.4 kg. Are the stays drilled at the outer ends no. Margin stays: Diameter 42 mm (At turned off part, 45 mm Over threads).  
 No. of threads per inch 9 Area supported by each stay 200 x 200 mm Working pressure by Rules 15 kg  
 Tubes; Material Steel External diameter 89 mm Thickness 4 mm No. of threads per inch 11  
 Pitch of tubes 120 mm x 117 mm Working pressure by Rules 15 kg Manhole compensation: Size of opening 300 x 400 mm  
 Section of compensating ring 800 mm diam x 24 mm No. of rivets and diameter of rivet holes 16 - 28.5  
 Outer row rivet pitch at ends 173 mm Depth of flange if manhole flanged 61 mm Steam Dome: Material Steel  
 Tensile strength 42 kg Thickness of shell 4 mm Description of longitudinal joint 9  
 Diameter of rivet holes 9 mm Pitch of rivets 9 mm Percentage of strength of joint 9  
 Internal diameter 89 mm Working pressure by Rules 15 kg Thickness of crown 4 mm No. and diameter of rivets 16 - 28.5  
 How connected to shell 9 Size of doubling plate under dome 9 Diameter of rivet holes and of rivets in outer row in dome connection to shell 9

Type of Superheater Schmidt's Patent Manufacturer G. Seebert & A. G. Geesbrouck  
 Number of elements 48 Material of tubes seamless drawn steel Internal diameter and thickness of tubes 18 mm - 3 mm  
 Material of headers Steel casting Tensile strength 42 kg Thickness 20 mm Can the superheater be shut off the boiler be worked separately yes  
 Is a safety valve fitted to every part of the superheater which can be shut off from the boiler yes  
 Area of each safety valve 50 mm Are the safety valves fitted with easing gear yes Working pressure as Rules 54 kg 19 cm  
 Pressure to which the safety valves are adjusted (185 lb) 13 kg Hydraulic test pressure 200 kg/cm<sup>2</sup>  
 Castings 39 kg/cm<sup>2</sup> and after assembly in place 39 kg/555 lb Are drain cocks or valves fitted to free the superheater from water where necessary yes  
 Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with yes

The foregoing is a correct description,

HOWALDTSWEEK

Manufact

Dates of Survey 4/8 - 13/8 - 22/8 - 26/8 - 29/8 - 7/9 Are the approved plans of boiler and superheater forwarded herewith yes  
 (If not state date of approval.)  
 Dates of Survey 3/10 - 7/10 - 11/10/24 Total No. of visits 9

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) Material and workmanship of boilers and superheaters are of good quality. The material used in the construction are made at Works recognized by the Committee and tested in conformity with the requirements of the Rules. Boilers and superheaters were found to be tight and round respect under hydraulic pressure of 370 lb and 555 lb respectively.

## THICKNESS OF ADJUSTING WASHERS.

Form.	Aft.
Stb Boiler: 10 mm	9 mm
Port " : 12 mm	14 mm

Survey Fee 9 attached report When applied for 192  
 Travelling Expenses (if any) 9 on machinery When received 192

M. V. R.

Friedrich

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

FRI. 21 NOV 1924

FRI. 12 JUN 1925

Assigned

See other rpt  
Ham 16101

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Foundation