

REPORT ON BOILERS.

Received at London Office

22 FEB 1906

Date of writing Report 1906 When handed in at Local Office 1906 Port of *Amsterdam*

No. in Survey held at *Amsterdam* Date, First Survey *14 January* Last Survey *27 January* 1906
 Reg. Book. *Amsterdam* (Number of Visits *7*) Gross Tons }
 on the *Messrs C. v. d. Guehen Jard No 629* Net

Master *Krumpholtz* Built at *Krumpholtz* By whom built *K.V.C.P. Gussen & Zn's Scheepswerven* Yard No. *629* When built *1906*

Engines made at *Amsterdam* By whom made *Messrs Werkspoor* Engine No. When made *1906*

Boilers made at *Amsterdam* By whom made *Messrs K.V. Werkspoor* Boiler No. *2729* When made *1906*

Nominal Horse Power Owners *Comp. Shell Gasbau* Port belonging to

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel *Messrs Deutsche Rohrenwerke & G. Werke Thyssen* (Letter for Record)

Total Heating Surface of Boilers *500 sq ft* Is forced draught fitted *no* Coal or Oil fired *oil*

No. and Description of Boilers *1 Horizontal Multitubular donkey boiler* Working Pressure *180 lbs*

Tested by hydraulic pressure to *320 lbs* Date of test *27 January* No. of Certificate *420* Can each boiler be worked separately *no*

Area of Firegrate in each Boiler *2.4 sq ft* No. and Description of safety valves to each boiler *2 Spring loaded*

Area of each set of valves per boiler *per Rule 3.20" as fitted 4.90"* Pressure to which they are adjusted *180 lbs*. Are they fitted with casing 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 or woodwork *no* Is oil fuel carried in the double bottom under boilers *no*

Smallest distance between shell of boiler and tank top plating *no* Is the bottom of the boiler insulated *no*

Largest internal dia. of boilers *2250 mm* Length *2700 mm* Shell plates: Material *SM S* Tensile strength *46.52 kg*

Thickness *17 mm* Are the shell plates welded or flanged *no* Description of riveting: circ. seams *end dbl riveted inter. riveted*

long. seams *dbl butt straps, dbl riveted* Diameter of rivet holes in *circ. seams 22 mm long. seams 22 mm* Pitch of rivets *79 mm 116 mm*

Percentage of strength of circ. end seams *plate 70% rivets 46%* Percentage of strength of circ. intermediate seam *plate rivets*

Percentage of strength of longitudinal joint *plate 81% rivets 82.5% combined 89.5%* Working pressure of shell by Rules *180 lbs*

Thickness of butt straps *inter 17 mm inner 17 mm* No. and Description of Furnaces in each Boiler *one Morison's furnace*

Material *SM S* Tensile strength *41-47 kg/cm²* Smallest outside diameter *720 mm*

Length of plain part *top bottom* Thickness of plates *crank 10 mm bottom 10 mm* Description of longitudinal joint *welded*

Dimensions of stiffening rings on furnace or c.c. bottom *no* Working pressure of furnace by Rules *197 lbs*

End plates in steam space: Material *SM S* Tensile strength *41-47 kg/cm²* Thickness *22 mm* Pitch of stays *375 mm*

How are stays secured *dbl nuts strengthening plate inside* Working pressure by Rules *206 lbs*

Tube plates: Material *front SM S back SM S* Tensile strength *41-47 kg/cm²* Thickness *22 mm 22 mm*

Mean pitch of stay tubes in nests *245 mm* Pitch across wide water spaces *340 mm* Working pressure *front 190 lbs back 190 lbs*

Girders to combustion chamber tops: Material *SM S* Tensile strength *44-50 kg/cm²* Depth and thickness of girder

at centre *160 x 32 mm* Length as per Rule *600 mm* Distance apart *190 mm* No. and pitch of stays

in each *2 x 200 mm* Working pressure by Rules *200 lbs* Combustion chamber plates: Material *SM S*

Tensile strength *41-47 kg/cm²* Thickness: Sides *10 mm* Back *10 mm* Top *10 mm* Bottom *10 mm*

Pitch of stays to ditto: Sides *200 x 200* Back *199 x 209 mm* Top *200 x 190 mm* Are stays fitted with nuts or riveted over *welded over*

Working pressure by Rules *182 lbs* Front plate at bottom: Material *SM S* Tensile strength *41-47 kg/cm²*

Thickness *22 mm* Lower back plate: Material *SM S* Tensile strength *41-47 kg/cm²* Thickness *22 mm*

Pitch of stays at wide water space *199 mm* Are stays fitted with nuts or riveted over *welded over*

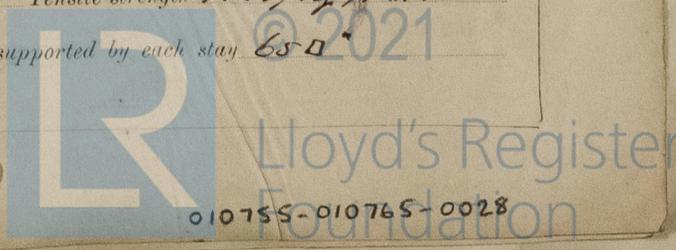
Working Pressure *310 lbs* Main stays: Material *SM S* Tensile strength *44-50 kg/cm²*

Diameter *At body of stay, 2 5/8" Over threads* No. of threads per inch *8* Area supported by each stay *2400"*

Working pressure by Rules *206 lbs* Screw stays: Material *SM S* Tensile strength *41-47 kg/cm²*

Diameter *At turned off part, 1 1/2" Over threads* No. of threads per inch *9* Area supported by each stay *650"*

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Working pressure by Rules *100 lbs* Are the stays drilled at the outer ends *Yes* Margin stays: Diameter *At turned off part, or Over threads 1 1/2"*
 No. of threads per inch *9* Area supported by each stay *77 sq"* Working pressure by Rules
 Tubes: Material *SMS* External diameter *Plain 2 3/4"* Thickness *No 9.488 5/16"* No. of threads per inch *11*
 Pitch of tubes *90 mm* Working pressure by Rules *200 lbs* Manhole compensation: Size of opening in shell plate *375 x 475 mm* Section of compensating ring *14 sq"* No. of rivets and diameter of rivet holes *40 - 25 mm*
 Outer row rivet pitch at ends *125 mm* Depth of flange if manhole flanged *90 mm* Steam Dome: Material *C*
 Tensile strength Thickness of shell Description of longitudinal joint
 Diameter of rivet holes Pitch of rivets Percentage of strength of joint *Plate Rivets*
 Internal diameter Working pressure by Rules Thickness of crown No. and diameter of stays
 How connected to shell Inner radius of crown Working pressure by Rules
 Size of doubling plate under dome Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell

Type of Superheater

Manufacturers of *Tubes Steel castings*
 Number of elements Material of tubes Internal diameter and thickness of tubes
 Material of headers Tensile strength Thickness Can the superheater be shut off and the boiler be worked separately
 Is a safety valve fitted to every part of the superheater which can be shut off from the boiler
 Area of each safety valve Are the safety valves fitted with easing gear Working pressure as per Rules
 Pressure to which the safety valves are adjusted Hydraulic test pressure: tubes, castings and after assembly in place Are drain cocks or valves fitted to free the superheater from water where necessary

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

The foregoing is a correct description,

WERKSPOR N.V.

Manufacturer.

Dates of Survey *Jan 14, 16, 17, 21, 23, 25, 27* Are the approved plans of boiler and superheater forwarded herewith *E 13.9.25*
 while building *During erection on board vessel - - -* (If not state date of approval.)
 Total No. of visits

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

This donkey boiler has been made in accordance with the rules and Secretary's letters. Material duly tested. Workmanship throughout good

Survey Fee ... *50.40* : When applied for. 192
 Travelling Expenses (if any) *2.00* : When received. *13-3-1926*

W. J. Duffin
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI. 3 APR 1926**

Assigned *Su F. C. Rpl.*



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