

## REPORT ON BOILERS.

No. 23867

Received at London Office

23 AUG 1935

Date of writing Report 20.8.1935 When handed in at Local Office

192

Port of Rotterdam

No. in Reg. Book. Survey held at

Rotterdam

Date, First Survey 27 Dec 1934 Last Survey 16 Aug 1935

on the

MV "C S WALDEN"

(Number of Visits 29) Gross 10627 Tons Net 6292

Master *J. M. J.* Built at Rotterdam By whom built *Rotterdamse Droogdok Maatschappij* Yard No. 182 When built 1935  
 Engines made at *Kiel* By whom made *Friedrich Krupp Germania Werke* Engine No. 4848 When made 1935  
 Boilers made at *Rotterdam* By whom made *Rotterdamse Droogdok Maatschappij* Boiler No. 521-23 When made 1935  
 Nominal Horse Power 900 Owners *The Oriental Tankers Ltd* Port belonging to *Hongkong*

MULTITUBULAR BOILERS ~~MAIN~~, ~~AUXILIARY~~, OR DONKEY.Manufacturers of Steel *Abessons Vethovree Menees Steel & Ironworks Co* (Letter for Record *S*)Total Heating Surface of Boilers 5436 sq ft Is forced draught fitted *yes* Coal or Oil fired *Oil*No. and Description of Boilers *two Multitubular Marine boilers* Working Pressure 200 lbsTested by hydraulic pressure to 350 lbs Date of test 5.6.35 No. of Certificate 967 Can each boiler be worked separately *yes*

Area of Firegrate in each Boiler *2* No. and Description of safety valves to each boiler *2 spring loaded high lifting*  
 Dia of each set of valves per boiler *per Rule 15.8 D* Pressure to which they are adjusted *4"* Are they fitted with easing gear *yes*

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler *No Main boiler*Smallest distance between boilers or uptakes and bunkers or woodwork *Over 36"* 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 *yes*Largest internal dia. of boilers 14' 6" Length 11' 3 1/8" Shell plates: Material *S. M. Steel* Tensile strength 28-32 tonsThickness 1 1/4" Are the shell plates welded or flanged *no* Description of riveting: circ. seams *end lap 2 x riv*

long. seams *Double butt straps 3 x riv* Diameter of rivet holes in *circ. seams 1 1/16"* Pitch of rivets *4 1/16"*  
*long. seams 1 7/16"*

Percentage of strength of circ. end seams *plate 61%* Percentage of strength of circ. intermediate seam *plate -*  
*rivets 59%* *rivets -*

Percentage of strength of longitudinal joint *plate 85%* Working pressure of shell by Rules 211 lbs  
*rivets 88%*  
*combined 87.4%*

Thickness of butt straps *outer 1 1/16"* No. and Description of Furnaces in each Boiler *3 Moussons patent*Material *S. M. Steel* Tensile strength 26-30 tons Smallest outside diameter 3' 6 1/2"Length of plain part *top -* Thickness of plates *crown 5/8"* Description of longitudinal joint *Welded.*Dimensions of stiffening rings on furnace or c.c. bottom *no* Working pressure of furnace by Rules 214 lbsEnd plates in steam space: Material *S. M. Steel* Tensile strength 26-30 tons Thickness 1 3/8" Pitch of stays 20 x 20"How are stays secured *Screwed in plates with nuts outside* Working pressure by Rules 200 lbs

Tube plates: Material *front S. M. Steel* Tensile strength 26-30 tons Thickness *7/8"*  
*back S. M. Steel* Tensile strength 26-30 tons Thickness *3/4"*

Mean pitch of stay tubes in nests *7 3/4" x 11 3/8"* Pitch across wide water spaces *1' 2 1/16"* Working pressure *front 207 lbs*Girders to combustion chamber tops: Material *S. M. Steel* Tensile strength 28-32 tons Depth and thickness of girderat centre *9 3/4" x 2 x 1 3/16"* Length as per Rule *2' 10 1/2"* Distance apart *8 1/2"* No. and pitch of staysin each *3 at 8 1/4"* Working pressure by Rules 212 lbs Combustion chamber plates: Material *S. M. Steel*Tensile strength 26-30 tons Thickness: Sides *3/4"* Back *3/4"* Top *3/4"* Bottom *1"*Pitch of stays to ditto: Sides *8 1/4" x 7 1/2"* Back *8 1/2" x 7 3/4"* Top *8 1/2" x 8 1/4"* Are stays fitted with nuts or riveted over *Riveted over*Working pressure by Rules 201 lbs Front plate at bottom: Material *S. M. Steel* Tensile strength 26-30 tonsThickness *7/8"* Lower back plate: Material *S. M. Steel* Tensile strength 26-30 tons Thickness *3/4"*Pitch of stays at wide water space *1' 2 1/16"* Are stays fitted with nuts or riveted over *Fitted with nuts*Working Pressure 337 lbs Main stays: Material *S. M. Steel* Tensile strength 28-32 tonsDiameter *At body of stay, 3 1/4"* No. of threads per inch *9* Area supported by each stay *4000"*Working pressure by Rules 231 lbs Screw stays: Material *S. M. Steel* Tensile strength 26-30 tonsDiameter *At turned off part, 1 7/8"* No. of threads per inch *9* Area supported by each stay *Back 65,875 sq in Top 70,125 sq in*



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Working pressure by Rules 214 lbs Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 2" or Over threads 2"  
No. of threads per inch 9 Area supported by each stay 950" Working pressure by Rules 261 lbs  
Tubes: Material Steel External diameter { Plain 2 3/4 Thickness { 2 3/4 No. of threads per inch 9  
Pitch of tubes 4 x 3 7/8 Working pressure by Rules 215 lbs Manhole compensation: Size of opening in  
shell plate 18" x 22" Section of compensating ring 2 1/4" x 1 1/4" No. of rivets and diameter of rivet holes 34 @ 1 1/16"  
Outer row rivet pitch at ends 9 1/2" Depth of flange if manhole flanged 2 1/4" Steam Dome: Material Steel  
Tensile strength 2 Thickness of shell 2 Description of longitudinal joint Plate  
Diameter of rivet holes 2 Pitch of rivets 2 Percentage of strength of joint { Rivets 2  
Internal diameter 2 Working pressure by Rules 2 Thickness of crown 2 No. and diameter of  
stays 2 Inner radius of crown 2 Working pressure by Rules 2  
How connected to shell 2 Size of doubling plate under dome 2 Diameter of rivet holes and pitch  
of rivets in outer row in dome connection to shell 2

Type of Superheater 2 Manufacturers of { Tubes DeLorme between water  
Number of elements Two each Material of tubes Steel Internal diameter and thickness of tubes 2 1/2" x 1/16"  
Material of headers S. M. Steel Tensile strength 28-32 tons Thickness 1 1/2" Can the superheater be shut off and  
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 2" Are the safety valves fitted with easing gear yes Working pressure as per  
Rules 2 Pressure to which the safety valves are adjusted 205 lbs Hydraulic test pressure:  
tubes 500 lbs Headers 500 lbs and after assembly in place 600 lbs 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,

Dates { During progress of work in shops - - - 1934 1935  
while building { During erection on board vessel - - - 1934 1935  
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval) Retained  
Total No. of visits 29

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

These boilers and superheaters have been made under our supervision, in accordance to the approved plans, Society's Rules and Secretary's letters, material tested as required and workmanship good, All tested by hydraulic pressure as required and found sound and tight.

Survey Fee 2 Boilers and Superheaters 500.00  
Travelling Expenses (if any) 2 2

When applied for, 192  
When received, 9.9.1923

Committee's Minute

FRI. 13 SEP 1936

FRI. 17 APR 1936

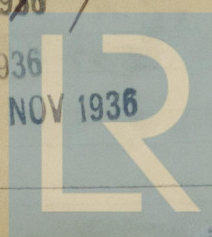
Assigned

See Rob. J.E. 2386

FRI. 7 JUL 1936

FRI. 27 NOV 1936

Engineer Surveyor to Lloyd's Register of Shipping.



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