

## REPORT ON BOILERS.

No. 136982

29 MAY 1936

Received at London Office

Writing Report 26 May 1936 When handed in at Local Office 10 Port of Amsterdam  
 in Survey held at Amsterdam Date, First Survey 10 June 1935 Last Survey 20 April 1936  
 on the Single Screw Motor Vessel "MACOMA" (Number of Visits 20-) Gross 2011- Tons Net 4767  
 Built at Amsterdam By whom built Ned Scheepb 114 Yard No. 235 When built 1936  
 Engines made at Amsterdam By whom made N.V. Werkspoor Engine No. When made 1936  
 Boilers made at Amsterdam By whom made N.V. Werkspoor Boiler No. When made 1936  
 Indicated Horse Power 502 Owners N.V. Petroleum N° 1 La Larona Port belonging to 's Gravenhage

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

Manufacturers of Steel Skel Company of Scotland & The Broomfield Boiler Works Ltd (Letter for Record)  
 Heating Surface of Boilers 2560 sq ft Is forced draught fitted Yes Coal or Oil fired oil  
 and Description of Boilers One horizontal Multitubular Boiler Working Pressure 100 lbs  
 Tested by hydraulic pressure to 320.485 Date of test 9-12-35 No. of Certificate 395 Can each boiler be worked separately  
 Area of Firegrate in each Boiler No. and Description of safety valves to each boiler Two spring loaded  
 Area of each set of valves per boiler {per Rule 19.60" as fitted 14.70" 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 600 mm Is oil fuel carried in the double bottom under boilers  
 Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated Yes  
 Largest internal dia. of boilers 4400 mm Length 34600 mm Shell plates: Material SMS Tensile strength 29.75-93 ton  
 Thickness 29 mm Are the shell plates welded or flanged Description of riveting: circ. seams {end double riveted inter. 20 mm  
 1. seams {circ. seams 30 mm long. seams 30 mm Pitch of rivets {20 mm  
 Percentage of strength of circ. end seams {plate 67.5% rivets 42.3% Percentage of strength of circ. intermediate seam {plate 25% rivets 25%  
 Percentage of strength of longitudinal joint {plate 25% rivets 25% combined 27% Working pressure of shell by Rules 104.35  
 Thickness of butt straps {outer 25 mm inner 25 mm No. and Description of Furnaces in each Boiler 3 Morrison's furnaces  
 Material SMS Tensile strength 26-30 ton Smallest outside diameter 1120 mm  
 Length of plain part {top bottom Thickness of plates {crown 15 mm bottom 15 mm Description of longitudinal joint Welded  
 Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 193 lbs  
 End plates in steam space: Material SMS Tensile strength 26-30 ton Thickness 29 mm Pitch of stays 440 x 450 mm  
 How are stays secured double nuts Working pressure by Rules  
 Side plates: Material {front back SMS Tensile strength {26-30 ton Thickness {23 mm 22 mm  
 Mean pitch of stay tubes in nests 240 mm Pitch across wide water spaces 360 mm Working pressure {front 220 lbs back 210 lbs  
 Girders to combustion chamber tops: Material SMS Tensile strength 20-32 ton Depth and thickness of girder  
 centre 220 mm x 30 mm Length as per Rule 700 mm Distance apart 220 mm No. and pitch of stays  
 each 3-200 mm Working pressure by Rules 210 lbs Combustion chamber plates: Material SMS  
 Tensile strength 26-30 ton Thickness: Sides 10 mm Back 19 mm Top 10 mm Bottom 25 mm  
 Pitch of stays to ditto: Sides 200 x 200 mm Back 226 x 195 mm Top 200 x 220 mm Are stays fitted with nuts or riveted over riveted over  
 Working pressure by Rules 196 lbs Front plate at bottom: Material SMS Tensile strength 26-30 ton  
 Thickness 23 mm Lower back plate: Material SMS Tensile strength 26-30 ton Thickness 23 mm  
 Pitch of stays at wide water space 366 mm Are stays fitted with nuts or riveted over with nuts  
 Working Pressure 190 lbs Main stays: Material SMS Tensile strength 20-32 ton  
 Diameter {At body of stay, or Over threads 3" No. of threads per inch 8 Area supported by each stay 2060"  
 Working pressure by Rules 220 lbs Screw stays: Material SMS Tensile strength 26-30 ton  
 Diameter {At turned off part, or Over threads 1 1/2" No. of threads per inch 11 Area supported by each stay 60.250"



Working pressure by Rules 105 lbs Are the stays drilled at the outer ends Yes Margin stays: Diameter { At turned off part, Over threads 1 5/8" }  
No. of threads per inch 11 Area supported by each stay 77.50" Working pressure by Rules 196 lbs  
Tubes: Material Iron External diameter { Plain 2 3/4" Stay 2 3/4" } Thickness 1/16" x 9/16" No. of threads per inch 11  
Pitch of tubes 100 x 90 mm Working pressure by Rules plain 215 lbs stay 195 lbs Manhole compensation: Size of opening 54-32 mm  
shell plate 370 x 470 mm Section of compensating ring 270" No. of rivets and diameter of rivet holes 54-32 mm  
Outer row rivet pitch at ends 220 mm Depth of flange if manhole flanged 80 mm  
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 of rivets in outer row in dome connection to shell

Type of Superheater  
Number of elements Material of tubes Manufacturers of { Tubes Steel castings }  
Material of headers Tensile strength Internal diameter and thickness of tubes  
the boiler be worked separately Thickness Can the superheater be shut off from the boiler  
Area of each safety valve Is a safety valve fitted to every part of the superheater which can be shut off from the boiler  
Rules Are the safety valves fitted with easing gear Working pressure  
tubes Pressure to which the safety valves are adjusted Hydraulic test pressure  
and after assembly in place Are drain cocks or valves to free the superheater from water where necessary  
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes

The foregoing is a correct description,  
WERKSPOR N.V. *[Signature]* Manufacturer

Dates of Survey { During progress of work in shops - - June 10-25, July 10-15 Aug 1-12  
while building { During erection on board vessel - - - Sept 16-26 Oct 5-7-16-29 Nov 11-22  
Dec 9  
Feb 3-24-27 April 14-20 }  
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)  
Total No. of visits 20

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. Ans reports 13434 Mr. Roper

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)  
The Boiler has been made under special survey to approved plans in accordance with the rules & Secretary's letters  
Material & workmanship good  
Boiler tested by hydraulic pressure as per rules found sound & tight  
Properly fastened aboard, placed in Machinery aft in separate boiler room on a special made hoendek

Survey Fee ... £ : : When applied for, 19  
Travelling Expenses (if any) £ : : When received, 19

*[Signature]*  
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute FRI. 12 JUN 1936  
Assigned See other Ans. J.E. 13698