

REPORT ON BOILERS.

Received at London Office 13 JUL 1931

Date of writing Report 8 July 1931 When handed in at Local Office

192 Port of Rotterdam

No. in Survey held at Rotterdam

Date, First Survey 24 Sept 1930. Last Survey 30 June 1931

Reg. Book.

(Number of Visits 13) (Gross 8267.60 Tons) (Net 4867.37)

on the m/v "MACUBA"

Master Built at Rotterdam By whom built Houthoff-Schepman Yard No. 469 When built 1931

Engines made at Amsterdam By whom made Werkspoor N.V. Engine No. When made 1931

Boilers made at Rotterdam By whom made Houthoff-Schepman van P. Smit & N.V. Boiler No. 607-00 When made 1931

Nominal Horse Power 163.4 Owners Key La Couronne Port belonging to Grantham

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

Manufacturers of Steel Hoesmann Rohrenwerke Met Schiedamschen (Letter for Record 5)

Total Heating Surface of Boilers 2452 sq m Is forced draught fitted Yes Coal or Oil fired oil

No. and Description of Boilers Two marine multitubular boilers Working Pressure 150 lbs.

Tested by hydraulic pressure to 275 lbs Date of test 21-2-31 No. of Certificate 944 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler Two spring loaded high lift

Area of each set of valves per boiler (per Rule 72.19 cm² as fitted 72.6 Pressure to which they are adjusted 150 lbs 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 1400 mm Is oil fuel carried in the double bottom under boilers no

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

Largest internal dia. of boilers 3200 mm Length 3200 mm Shell plates: Material Sell steel Tensile strength 46.8-52

Thickness 20 mm Are the shell plates welded or flanged no Description of riveting: circ. seams (end double inter. v)

long. seams double single rivet diameter of rivet holes in (circ. seams 25 mm / long. seams 25 mm Pitch of rivets (84 mm / 130 mm)

Percentage of strength of circ. end seams (plate 70 % rivets 43.3 Percentage of strength of circ. intermediate seam (plate v rivets v)

Percentage of strength of longitudinal joint (plate 80.8 rivets 78.5 combined 87.8 Working pressure of shell by Rules 11 kg per 19 cm

Thickness of butt straps (outer 19 mm / inner 19 No. and Description of Furnaces in each Boiler Two Houssons patent

Material Sell steel Tensile strength 41-47 kg per 17 mm Smallest outside diameter 872 mm

Length of plain part (top v / bottom v Thickness of plates (crown 11 mm / bottom " Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.c. bottom v Working pressure of furnace by Rules 12.6 kg per 19 cm

End plates in steam space: Material Sell steel Tensile strength 41-47 Thickness 23 mm Pitch of stays 400 mm

How are stays secured Double nutted Working pressure by Rules 12.6 kg

Tube plates: Material (front Sell steel / back Sell steel Tensile strength (41-47 / 41-47 Thickness (23 mm / 19 mm)

Mean pitch of stay tubes in nests 300 x 200 Pitch across wide water spaces 360 mm Working pressure (front 10.0 kg / back 16.6 kg)

Girders to combustion chamber tops: Material Sell steel Tensile strength 44-50 Depth and thickness of girder

at centre 160 x 2 x 16 mm Length as per Rule 650 mm Distance apart 200 mm No. and pitch of stays

in each 2 x 210 mm Working pressure by Rules 11.9 kg. Combustion chamber plates: Material Sell steel

Tensile strength 41-47 Thickness: Sides 17 mm Back 17 mm Top 17 mm Bottom 17 mm

Pitch of stays to ditto: Sides 105 x 210 Back 200 x 210 Top 200 x 210 Are stays fitted with nuts or riveted over riveted and nutted in margin

Working pressure by Rules 11.6 kg. Front plate at bottom: Material Sell steel Tensile strength 41-47

Thickness 23 mm Lower back plate: Material Sell steel Tensile strength 41-47 Thickness 23 mm

Pitch of stays at wide water space 460 x 250 Are stays fitted with nuts or riveted over Double nutted

Working Pressure 16 kg. Main stays: Material Sell steel Tensile strength 44-50 kg.

Diameter (At body of stay, 2 3/8" / Over threads, 2 3/8" No. of threads per inch 8 Area supported by each stay 1600 sq cm

Working pressure by Rules 11 kg. Screw stays: Material Sell steel Tensile strength 41-47

Diameter (At turned off part, 31.9 mm / Over threads, 1 3/8" No. of threads per inch 11 Area supported by each stay 403 sq cm

Working pressure by Rules 11.3 kg. Are the stays drilled at the outer ends Yes Margin stays: Diameter ^(At turned off part) 35.1 mm
 No. of threads per inch 11 Area supported by each stay 390 x 70 mm Working pressure by Rules 14.5 kg
 Tubes: Material Carbon iron External diameter ^{Plain} 2 3/4" Thickness ^{Stay} 5/16" - 1/4" No. of threads per inch 11
 Pitch of tubes 100 mm Working pressure by Rules 13.4 kg Manhole compensation: Size of opening in
 shell plate 400 x 500 mm Section of compensating ring 165 x 25 mm No. of rivets and diameter of rivet holes 20 x 25 mm
 Outer row rivet pitch at ends 176 mm Depth of flange if manhole flanged 60 Steam Dome: Material none
 Tensile strength 190 Thickness of shell - Description of longitudinal joint -
 Diameter of rivet holes - Pitch of rivets - Percentage of strength of joint ^{Plate} -
 Internal diameter - Working pressure by Rules - Thickness of crown - No. and diameter of
 stays - Inner radius of crown - Working pressure by Rules -
 How connected to shell - 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 none Manufacturers of ^{Tubes} -
 Number of elements - Material of tubes - ^{Steel castings} - 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 23 inclusive for boilers been complied with Yes.

The foregoing is a correct description,
 N.V. MACHINEFABRIEK & SCHEEPSWERF
 van P. SMIT Jr., ROTTERDAM, Manufacturer.

Dates of Survey ^(During progress of work in shops - -) 24/9 - 21/10 - 18/11 - 3-17/12 1930 Are the approved plans of boiler and superheater forwarded herewith no
 while building ^(During erection on board vessel - - -) 17/3 - 10/6 - 30/6 1931 Total No. of visits 13
 (If not state date of approval.) 24-6-30

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The boilers have been made and fitted in accordance with the approved plans Society's Rules and Secretary's letters. The workmanship is good and hydrostatic test as per Rules satisfactory.

Survey Fee £ 196.00 When applied for, 10/7 1931
 Travelling Expenses (if any) £ 5.00 When received, 16.7 1931

A.P. Ryh.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 21 JUL 1931

Assigned See F.C. Rep.

Rpt. 13.

REF

Date of writing
 No. in Survey Reg. Book.

Built at
 Owners
 Electric Light
 Is the Vessel

System of
 Pressure of
 Direct or
 If alternating
 Has the Auto
 Generators
 are they over
 Where more th
 series with each
 Are all termina
 short circuited

Position of
 is the ventilat
 if situated

are their aces
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Switches
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