

## REPORT ON BOILERS.

No. 13768

4 AUG 1936

Received at London Office

Date of writing Report 30 July 1936 When handed in at Local Office

19

Port of

Amsterdam

No. in Survey held at

Amsterdam

Date, First Survey

10 June

Last Survey

17 July

1936

Reg. Book.

on the Single Screw Motor Vessel "MIRALDA"

(Number of Visits 22 -)

Tons

Gross 8002

Net 4746

Master

Built at

Amsterdam

By whom built

N.V. Ned. Scheepb. M<sup>4</sup>

Yard No.

286

When built 1936

Engines made at

Amsterdam

By whom made

N.V. Werkspun

Engine No.

When made 1936

Boilers made at

Amsterdam

By whom made

N.V. Werkspun

Boiler No.

When made 1936

Nominal Horse Power

502

Owners

N.V. Petroleum M<sup>4</sup> La Carona

Port belonging to

S. Grootenboeg

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

Manufacturers of Steel Shell of Scotland Broomfield Boiler works Ltd

(Letter for Record S.)

Total Heating Surface of Boilers

2560

Is forced draught fitted

Yes

Coal or Oil fired

Crude oil

No. and Description of Boilers

on horizontal Multitubular boiler

Working Pressure 180 lbs

Tested by hydraulic pressure to

320 lbs

Date of test 17-12-35

No. of Certificate

390

Can each boiler be worked separately

Area of Firegrate in each Boiler

✓

No. and Description of safety valves to each boiler

2 Spring loaded

Area of each set of valves per boiler

per Rule 19.6

as fitted 19.60

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

no

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

3460 mm

Shell plates: Material

SMS

Tensile strength

29.75-30 ton

Thickness

29 mm

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end dbl riveted

long. seams

dbl butt straps

Diameter of rivet holes in

circ. seams 30 mm

long. seams 30 mm

Pitch of rivets

87 mm

Percentage of strength of circ. end seams

plate 67.5

rivets 42.3

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate 85

rivets 85

combined 87

Working pressure of shell by Rules 104 lbs

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

1130 mm

Length of plain part

top

Thickness of plates

crown 15 mm

bottom

Description of longitudinal joint

welded

Dimensions of stiffening rings on furnace or c.e. 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

How are stays secured

dbl nuts

Working pressure by Rules 190 lbs

Tube plates: Material

front SMS

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

at centre

320 x 30 mm

Length as per Rule

700 mm

Distance apart

220 mm

No. and pitch of stays

in 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

welded 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

filled 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

3060"

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"

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Working pressure by Rules 105 lbs Are the stays drilled at the outer ends Yes Margin stays: Diameter <sup>At turned off part,</sup> 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 <sup>Plain</sup> 2 3/4" <sup>Stay</sup> 2 3/4" Thickness <sup>No. 9 L.S.G.</sup> 5/16" and 7/16" No. of threads per inch 11  
Pitch of tubes 160 x 90 mm Working pressure by Rules plain 215 lbs 7/16 195 lbs Manhole compensation: Size of opening in  
shell plate 370 x 470 mm Section of compensating ring 370" 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 00 mm Steam Dome: Material none  
Tensile strength \_\_\_\_\_ Thickness of shell \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_  
Diameter of rivet holes \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Percentage of strength of joint <sup>Plate</sup> \_\_\_\_\_  
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 \_\_\_\_\_ Manufacturers of <sup>Tubes</sup> \_\_\_\_\_  
Number of elements \_\_\_\_\_ Material of tubes \_\_\_\_\_ <sup>Steel castings</sup> \_\_\_\_\_  
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 Yes

The foregoing is a correct description,

**WERKSPOR N.V.**

Manufacturer.

Dates of Survey <sup>1935</sup> During progress of work in shops - - June 10-25 July 10-25 Aug 12 Are the approved plans of boiler and superheater forwarded herewith  
while building During erection on board vessel - - Sept 16-26 Oct 3-16-29 Nov 11-22 Dec 9-17 (If not state date of approval.) E 17-3-24  
Total No. of visits 22

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. M. Macoma HMS up 13434

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

The Boiler has been made in accordance with the approved plan and  
Secretary's letters, material fitted as per rules, workmanship throughout good.  
Boiler hydraulic tested as per rules found sound & tight  
Properly fastened aboard, placed in Motor room aft in separate boiler room  
on a special made brundick

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. 7 AUG 1936**

Assigned

See Ans. J.E. 13768



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Foundation