

## REPORT ON BOILERS.

No. 16009

Received at London Office

Date of writing Report 13.9.1926 When handed in at Local Office

192

Port of

Rotterdam.

No. in Reg. Book.

Survey held at

Rotterdam

Date, First Survey 30.4.25

Last Survey 14.10.1926

on the Donkey boiler M.V. SPONDILUS

(Number of Visits 9)

Gross  
Tons  
Net

Master

Built at

Rotterdam

By whom built

Mr Tjenwoord

Yard No. 503

When built 1924

Engines made at

Amsterdam

By whom made

Werkspoor

Engine No.

When made

Boilers made at

Rotterdam

By whom made

Mr "Tjenwoord"

Boiler No. 1820

When made 1924

Nominal Horse Power

1200

Owners

Anglo Saxon Petroleum Co

Port belonging to

London

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

Manufacturers of Steel

Damen Colwell &amp; Sons

(Letter for Record 3)

Total Heating Surface of Boilers

2452 sq ft

Is forced draught fitted

Yes

Coal or Oil fired

Oil

No. and Description of Boilers

2 Multitubular Donkey boilers

Working Pressure

180 lbs

Tested by hydraulic pressure to

320 lbs

Date of test

14/10/26

No. of Certificate

849

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

2 high lifting spring loaded

Area of each set of valves per boiler

per Rule  
as fitted

6038 sq in

Pressure to which they are adjusted

180 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 means

Smallest distance between boilers or uptakes and bunkers or woodwork

Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating

Placed in top lug room

the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

3200

Length

3250

Shell plates: Material

S.M. Steel

Tensile strength

29 1/2 - 35 tons

Thickness

22 melle

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end lap 2 x riv

long. seams

Double butt strap 3 x riv

Diameter of rivet holes in

circ. seams

25 melle

Pitch of rivets

81 melle

Percentage of strength of circ. end seams

plate 69.2 %  
rivets 45 %

Percentage of strength of circ. intermediate seam

plate  
rivets

Percentage of strength of longitudinal joint

plate 85.3 %  
rivets 90.2 %  
combined 88.2 %

Working pressure of shell by Rules

13.85 kg/cm<sup>2</sup>

Thickness of butt straps

outer 14 melle  
inner 20 melle

No. and Description of Furnaces in each Boiler

2 Monom patent

Material

S.M. Steel

Tensile strength

41-47 kg/cm<sup>2</sup>

Smallest outside diameter

874 melle

Length of plain part

top  
bottom

Thickness of plates

crown  
bottom

Description of longitudinal joint

Welded

Dimensions of stiffening rings on furnace or c.c. bottom

Working pressure of furnace by Rules

14.6 kg/cm<sup>2</sup>

End plates in steam space: Material

S.M. Steel

Tensile strength

41-47 kg/cm<sup>2</sup>

Thickness

25 melle

Pitch of stays

400 x 400 melle

How are stays secured

Screwed in plates with nuts on both sides

Working pressure by Rules

12.6 kg/cm<sup>2</sup>

Tube plates: Material

front S.M. Steel  
back S.M. Steel

Tensile strength

41-47 kg/cm<sup>2</sup>

Thickness

25 melle

Mean pitch of stay tubes in nests

200 x 300 melle

Pitch across wide water spaces

360 melle

Working pressure

front 12.6 kg/cm<sup>2</sup>  
back

Girders to combustion chamber tops: Material

S.M. Steel

Tensile strength

44'-50' kg/cm<sup>2</sup>

Depth and thickness of girder

at centre

160 x 2 x 18 melle

Length as per Rule

650 melle

Distance apart

200 melle

No. and pitch of stays

in each

2 x 210 melle

Working pressure by Rules

16.7 kg/cm<sup>2</sup>

Combustion chamber plates: Material

S.M. Steel

Tensile strength

41-47 kg/cm<sup>2</sup>

Thickness: Sides

18 melle

Back

18 melle

Top

18 melle

Bottom

18 melle

Pitch of stays to ditto: Sides

210 x 183

Back

213 x 189

Top

210 x 200

Are stays fitted with nuts or riveted over

Riveted over

Working pressure by Rules

13.6 kg/cm<sup>2</sup>

Front plate at bottom: Material

S.M. Steel

Tensile strength

41-47 kg/cm<sup>2</sup>

Thickness

25 melle

Lower back plate: Material

S.M. Steel

Tensile strength

41-47 kg/cm<sup>2</sup>

Thickness

25 melle

Pitch of stays at wide water space

330 melle

Are stays fitted with nuts or riveted over

Fitted with nuts

Working Pressure

27.7 kg/cm<sup>2</sup>

Main stays: Material

S.M. Steel

Tensile strength

44'-50' kg/cm<sup>2</sup>

Diameter

At body of stay, 60 melle  
Over threads, 40 melle

No. of threads per inch

9

Area supported by each stay

160000

Working pressure by Rules

16.6 kg/cm<sup>2</sup>

Screw stays: Material

S.M. Steel

Tensile strength

41-47 kg/cm<sup>2</sup>

Diameter

At turned off part, 30 melle  
Over threads, 30 melle

No. of threads per inch

9

Area supported by each stay

top 41000 melle  
back 40257 melle  
total 59450 melle



Working pressure by Rules *14.45 lbs* Are the stays drilled at the outer ends *Yes* Margin stays: Diameter { At turned off part, *38 melle*  
 No. of threads per inch *9* Area supported by each stay *3900 melle* Working pressure by Rules *14.4 lbs*  
 Tubes: Material *Iron* External diameter { Plain *2 3/4"* Stay *2 1/4"* Thickness { *1/4" & 5/16"* No. of threads per inch *9*  
 Pitch of tubes *100 melle* Working pressure by Rules *205 lbs* Manhole compensation: Size of opening in  
 shell plate *410 x 510 melle* Section of compensating ring *185 x 10 melle* No. of rivets and diameter of rivet holes *34 à 30 melle*  
 Outer row rivet pitch at ends *220 melle* Depth of flange if *manhole* flanged *85 melle* Steam Dome: Material *-*  
 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 *-* 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 { 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 23 inclusive for boilers been complied with *Yes*

The foregoing is a correct description,

Went to shop for plans on 10/10/1927

BUENOS AIRES

*J. J. Ochoa*

Manufacturer:

Dates of Survey { During progress of work in shops - *1927 10 16 24 25 28 29 31 11 14*  
 while building { During erection on board vessel - *-*

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

Total No. of visits *9*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *The boilers have been made under special survey in accordance with the approved plan, Society, Rules and Secretary's letters, material tested as required and workmanship good*

Survey Fee ... *196.20* When applied for, *27/9 1927*  
 Travelling Expenses (if any) £ *-* When received, *15.10 1927*

*J. J. Ochoa*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 7 OCT 1927*

Assigned *See Minute on*  
*Rot Rpt 16809*  
*attached*

