

REPORT ON BOILERS.

No. 16009

Received at London Office

Date of writing Report 23.9.1926 When handed in at Local Office 1926 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 bus M.V. SPONDILUS (Number of Visits 9) Tons {Gross Net

Master Built at Rotterdam By whom built My Tjenowd Yard No. 503 When built 1924

Engines made at Amsterdam By whom made Werkhoven Engine No. When made

Boilers made at Rotterdam By whom made My "Tjenowd" Boiler No. 1820/14 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 James Colwell & Sons (Letter for Record 5)

Total Heating Surface of Boilers 2452 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 cm² 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 rooms 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 ton

Thickness 22 mill Are the shell plates welded or flanged No Description of riveting: circ. seams end lap 2 x riv inter.

long. seams Double butt straps 3 x riv Diameter of rivet holes in circ. seams 25 mill Pitch of rivets 81 mill 170 mill

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 85.5% rivets 90.2% combined 88.2% Working pressure of shell by Rules 13.85 kg/cm²

Thickness of butt straps outer 14 mill inner 20 mill No. and Description of Furnaces in each Boiler 2 Monom patent

Material S.M. Steel Tensile strength 41.47 kg/cm² Smallest outside diameter 874 mill

Length of plain part top bottom Thickness of plates crown 12 mill 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/cm²

End plates in steam space: Material S.M. Steel Tensile strength 41.47 kg/cm² Thickness 25 mill Pitch of stays 400 x 400 mill

How are stays secured Screwed in plates with nuts on both sides Working pressure by Rules 12.6 kg/cm²

Tube plates: Material front S.M. Steel back S.M. Steel Tensile strength 41.47 kg/cm² Thickness 25 mill 20 mill

Mean pitch of stay tubes in nests 200 x 300 mill Pitch across wide water spaces 360 mill Working pressure front 12.6 kg/cm² back

Girders to combustion chamber tops: Material S.M. Steel Tensile strength 44 - 50 kg/cm² Depth and thickness of girder

at centre 160 x 2 x 18 mill Length as per Rule 650 mill Distance apart 200 mill No. and pitch of stays

in each 2 at 210 mill Working pressure by Rules 16.7 kg/cm² Combustion chamber plates: Material S.M. Steel

Tensile strength 41.47 kg/cm² Thickness: Sides 18 mill Back 18 mill Top 18 mill Bottom 18 mill top solid heads

Pitch of stays to ditto: Sides 210 x 183 Back 215 x 189 Top 210 x 200 Are stays fitted with nuts or riveted over Riveted over

Working pressure by Rules 13.6 kg/cm² Front plate at bottom: Material S.M. Steel Tensile strength 41.47 kg/cm²

Thickness 25 mill Lower back plate: Material S.M. Steel Tensile strength 41.47 kg/cm² Thickness 25 mill

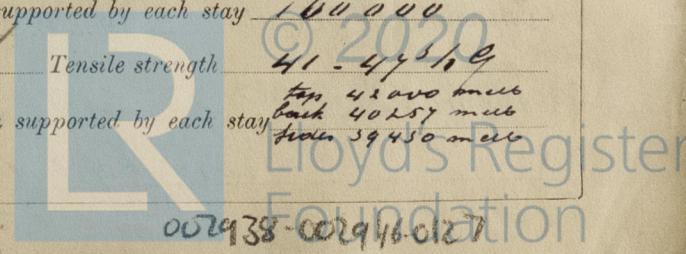
Pitch of stays at wide water space 330 mill Are stays fitted with nuts or riveted over Fitted with nuts

Working Pressure 27.7 kg/cm² Main stays: Material S.M. Steel Tensile strength 44 - 50 kg/cm²

Diameter At body of stay 60 mill Over threads 40 mill No. of threads per inch 9 Area supported by each stay 160000

Working pressure by Rules 16.6 kg/cm² Screw stays: Material S.M. Steel Tensile strength 41.47 kg/cm²

Diameter At turned off part Over threads 30 mill No. of threads per inch 9 Area supported by each stay top 41000 mill back 40257 mill sides 39450 mill



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Working pressure by Rules *14.05/100* Are the stays drilled at the outer ends *Yes* Margin stays: Diameter { At turned off part, or Over threads *38 melle*

No. of threads per inch *9* Area supported by each stay *39000 melle* Working pressure by Rules *14.4 kg/cm²*

Tubes: Material *Iron* External diameter { Plain *2 3/4"* Stay *2 3/4"* Thickness { *2 9/16"* & *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 ^{ring} 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

How connected to shell Inner radius of crown Working pressure by Rules

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

Area of each safety valve Is a safety valve fitted to every part of the superheater which can be shut off from the boiler

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,
Wantschapp voor Scheeps- en Werktuigbouw
Eindhoven
J. J. P. J. J. Manufacturer.

Dates of Survey { During progress of work in shops - - *1925 5/6 1926 24/9 7/10 25/8 20/11 14/10* Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

{ During erection on board vessel - - - 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 1925*

Travelling Expenses (if any) £ *106.20* When received, *15.10 1925*

J. J. P. J. J.
Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI. 7 OCT 1927**

Assigned *See Minute on Rot Rpt 16809 attached*

