

## REPORT ON OIL ENGINE MACHINERY.

No. 12394

Received at London Office

13 AUG 1931

Date of writing Report 3 August 1931 When handed in at Local Office

Port of AMSTERDAM

No. in Survey held at AMSTERDAM

Date, First Survey 7 October 1930 Last Survey 25 July 1931

Reg. Book.

Number of Visits 40

1931

on the ~~Twain~~ <sup>Screw</sup> vessel "MALVINA"Tons { Gross  
Net

Built at Rotterdam By whom built My. Fyenoord Yard No. 320 When built 1931

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

Monkey Boilers made at - By whom made - Boiler No. - When made -

Horse Power 2 X 2000 Owners Anglo Saxon Petroleum Co., Ltd. Port belonging to London

Horse Power as per Rule 713 714 Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted -

Trade for which vessel is intended -

**MAIN ENGINES, &c.**—Type of Engines *Werkspoor V.S. Supercharger* 2 or 4 stroke cycle Single or double acting  
 Maximum pressure in cylinders 540 lb. Diameter of cylinders 630 mm Length of stroke 1100 mm No. of cylinders 6 X 2 No. of cranks 6  
 Distance of bearings, adjacent to the Crank, measured from inner edge to inner edge 840 mm Is there a bearing between each crank *Yes*  
 Revolutions per minute 130 Flywheel dia. 2260 mm Weight 6600 kg Means of ignition *Self ignition* Kind of fuel used *Diesel oil*  
 Crank Shaft, dia. of journals as per Rule *approx* 410 mm Crank pin dia. 410 mm Crank Webs Mid. length breadth 440 mm Thickness parallel to axis 240 mm  
 as fitted 410 mm Mid. length thickness 240-245 mm Thickness around eye-hole 149 mm  
 Flywheel Shaft, diameter as per Rule *approx* 300-410 mm Intermediate Shafts, diameter as per Rule 4 Thrust Shaft, diameter at collars as per Rule 300 mm  
 as fitted 300-410 mm as fitted 4 as fitted 300 mm  
 Main Shaft, diameter as per Rule 4 Screw Shaft, diameter as per Rule 4 Is the { tube } shaft fitted with a continuous liner {  
 as fitted 4 as fitted 4

**Copper Liners, thickness in way of bushes** as per Rule 4 Thickness between bushes as per rule 4 Is the after end of the liner made watertight in the  
 as fitted 4 as fitted 4

**Propeller boss** If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner 4

**the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive** 4

**two liners are fitted, is the shaft lapped or protected between the liners** 4 Is an approved Oil Gland or other appliance fitted at the after end of the tube

**Length of Bearing in Stern Bush next to and supporting propeller** 4

**Propeller, dia.** 4 **Pitch** 4 **No. of blades** 4 **Material** 4 **whether Moveable** 4 **Total Developed Surface** 4 **sq. feet**

**Method of reversing Engines** *Air start motor* Is a governor or other arrangement fitted to prevent racing of the engine when declutched 4 Means of lubrication

**Thickness of cylinder liners** 4 Are the cylinders fitted with safety valves 4 Are the exhaust pipes and silencers water cooled or lagged with

**conducting material** *lagged* If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine 4

**Boiling Water Pumps, No.** 4 Is the sea suction provided with an efficient strainer which can be cleared within the vessel 4

**Bilge Pumps worked from the Main Engines, No.** 4 *2* Diameter 150 mm Stroke 254 mm Can one be overhauled while the other is at work 4

**Pumps connected to the Main Bilge Line** { No. and Size 4  
How driven 4

**Ballast Pumps, No. and size** 4 **Lubricating Oil Pumps, including Spare Pump, No. and size** 4 *2 bilge pumps, 35 tons each*  
*1. 4 bilge pumps, 6 x 4 x 10" diam*

**Are two independent means arranged for circulating water through the Oil Cooler** 4 **Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge**

**pumps, No. and size:—In Machinery Spaces** 4 **In Pump Room** 4

**Holds, &c.** 4

**Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size** 4

**Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes** 4 **Are the Bilge Suctions in the Machinery Spaces**

**from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges** 4

**Are all Sea Connections fitted direct on the skin of the ship** 4 **Are they fitted with Valves or Cocks** 4

**Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates** 4 **Are the Overboard Discharges above or below the deep water line** 4

**Are they each fitted with a Discharge Valve always accessible on the plating of the vessel** 4 **Are the Blow Off Cocks fitted with a spigot and brass covering plate** 4

**How are they protected** 4

**Have they been tested as per Rule** 4

**Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times** 4

**The arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one**

**apartment to another** 4 **Is the Shaft Tunnel watertight** 4 **Is it fitted with a watertight door** 4 **worked from** 4

**Are wood vessels, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork** 4

**Main Air Compressors, No.** 4 **No. of stages** 3 **Diameters** 520-520-1200 mm **Stroke** 450 mm **Driven by** *Main engine*

**Auxiliary Air Compressors, No.** 1 **No. of stages** 3 **Diameters** 180-11 1/2-5" **Stroke** 12" **Driven by** *Steam*

**All Auxiliary Air Compressors, No.** 4 **No. of stages** 4 **Diameters** 4 **Stroke** 4 **Driven by** 4

**Revolving Air Pumps, No.** 4 **Diameter** 4 **Stroke** 4 **Driven by** 4

**Auxiliary Engines crank shafts, diameter** as per Rule  
as fitted

**RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule** 4

**Are the internal surfaces of the receivers be examined and cleaned** 4 **Is a drain fitted at the lowest part of each receiver** 4

**High Pressure Air Receivers, No.** 4 **Cubic capacity of each** 400 L **Internal diameter** 450 mm **thickness** 11 mm 21

**Are they, lap welded or riveted longitudinal joint** *Seamless* **Material** *Steel* **Range of tensile strength** 50/56 kg/cm<sup>2</sup> **Working pressure** by Rules 1605 lb  
Actual 1000 lb

**Working Air Receivers, No.** 4 **Total cubic capacity** 4 **Internal diameter** 4 **thickness** 4

**Are they, lap welded or riveted longitudinal joint** 4 **Material** 4 **Range of tensile strength** 4 **Working pressure** by Rules  
Actual



IS A DONKEY BOILER FITTED? *was fitted to Rotterdam* so, is a report now forwarded? ☒

Is the donkey boiler intended to be used for domestic purposes only ☒

PLANS. Are approved plans forwarded herewith for Shafting *Plans in London* Receivers *Separate Tanks* *Office*  
(If not, state date of approval) *Monday 11th 1. 3. 4. 5.*

Donkey Boilers ☒ General Pumping Arrangements ☒ Oil Fuel Burning Arrangements ☒

### SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes*

State the principal additional spare gear supplied *See list attached.*

The foregoing is a correct description,

**WERKSPOR N.V.**

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1930. 4/10. 25/10. 4/11. 14/11. 2/12. 6/12. 18/12. 30/12.  
During erection on board vessel -- 1931. 4/1. 14/1. 24/1. 7/2. 6/2. 13/2. 28/2. 2/3. 6/3. 10/3. 14/3. 13/3. 14/3. 16/3. 18/3. 29/3.  
Total No. of visits 40.

Dates of Examination of principal parts—Cylinders 7/2 - 7/5 Covers 7/2 - 7/5 Pistons 6/1 - 14/4 Rods 4/10 - 24/5 Connecting rods 7/10 - 9/5

Crank shaft 14/1 - 4/6 Flywheel shaft 14/1 - 4/6 Thrust shaft 14/1 - 4/6 Intermediate shafts 2 Tube shaft 2

Screw shaft 2 Propeller 2 Stern tube 2 Engine seatings 2 Engines holding down bolts 2

Completion of fitting sea connections 2 Completion of pumping arrangements 2 Engines tried under working conditions 2

Crank shaft, Material *Steel* Identification Mark *Lloyd's* Flywheel shaft, Material *Steel* Identification Mark *Steel*

Thrust shaft, Material *Steel* Identification Mark *Lloyd's* Intermediate shafts, Material 2 Identification Marks 2

Tube shaft, Material 2 Identification Mark 2 Screw shaft, Material 2 Identification Mark 2

Is the flash point of the oil to be used over 150° F. *Yes*

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with *Yes*

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *oil tanks* If so, have the requirements of the Rules been complied with ☒

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with ☒

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *Mun. P. Smith's Vard cr: 12240.*

General Remarks (State quality of workmanship, opinions as to class, &c.)

*The engines have been made in accordance with the Rules, Secretary's letter and approved plans. All material tested as required and workmanship good. M*

*The engines have been forwarded to Rotterdam to be placed in mun. reg. Pignoretti's Yard. cr: 320. Copy Report forwarded to Rotterdam Surveyor.*

The amount of Entry Fee .. £ 40.- : When applied for, 19  
Special .. £ 1063. :  
Donkey Boiler Fee .. £ : When received, 31. 8. 1931  
Travelling Expenses (if any) £ 28. :  
F.R.I. 29 JAN 1932

Committee's Minute

Assigned

*See F.R.I. Rpt.*

*P. V. Berner*  
Engineer Surveyor to Lloyd's Register of Shipping.



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