

# REPORT ON OIL ENGINE MACHINERY.

No. 15738<sup>B</sup>  
AUG -4 1939

Received at London Office

Date of writing Report 29 July 1939 When handed in at Local Office

10 Port of Amsterdam

No. in Survey held at Reg. Book.

Amsterdam

Date, First Survey 16 March 1938 Last Survey 27 July 1939

Number of Visits 62

35105 on the <sup>Single</sup> ~~Twin~~ <sup>Triple</sup> ~~Quadruple~~ Screw vessel

## M.V. "TIBIA"

Tons { Gross 10356  
Net 6146.81

Built at Amsterdam By whom built N.V. Nederl. Scheepb. M<sup>t</sup> Yard No. 272 When built 1939

Engines made at Amsterdam By whom made N.V. Werkspoor Engine No. 743 When made 1939

Donkey Boilers made at Amsterdam By whom made N.V. Werkspoor Boiler No. 2025/120 When made 1939

Brake Horse Power 4660. Owners N.V. Petroleum M<sup>t</sup> de Corona Port belonging to 's Gravenhage

Nom. Horse Power as per Rule 628. Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which vessel is intended Open Sea Service

ALL ENGINES, &c.—Type of Engines Werkspoor's Diesel Supercharged or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 700 LBS ✓ Diameter of cylinders 650 mm ✓ Length of stroke 1400 mm ✓ No. of cylinders 10 ✓ No. of cranks 10 ✓

Mean Indicated Pressure 135 LBS ✓ Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 855 mm ✓ Is there a bearing between each crank yes ✓

Revolutions per minute 120 ✓ Flywheel dia. ✓ Weight ✓ Means of ignition Solid inject Kind of fuel used Diesel oil

Crank Shaft, { Solid forged as per Rule approved dia. of journals as fitted 475 mm Crank pin dia. 475 mm Crank Webs Mid. length breadth 900 mm shrunk Thickness parallel to axis - 273  
Semi built as fitted 475 mm Mid. length thickness 273/297 mm Thickness around eyehole - 210.5  
All built

Flywheel Shaft, diameter as per Rule ✓ Intermediate Shafts, diameter as fitted 440 mm Thrust Shaft, diameter at collars as fitted 460 mm

Tube Shaft, diameter as per Rule ✓ Screw Shaft, diameter as fitted 440 mm Is the { tube } shaft fitted with a continuous liner { screw } yes ✓

Bronze Liners, thickness in way of bushes as per Rule approved as fitted 21 mm Thickness between bushes as per Rule approved as fitted 16 mm Is the after end of the liner made watertight in the

propeller boss yes ✓ If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner O.L. ✓

If 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 ✓

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

shaft no ✓ If so, state type ✓ Length of Bearing in Stern Bush next to and supporting propeller 1547 mm ✓

Propeller, dia. 4960 mm Pitch 3660 mm No. of blades 4 Material Bronze whether Moveable no Total Developed Surface 89.846 sq. feet

Method of reversing Engines by bar Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes ✓ Means of lubrication

forced Thickness of cylinder liners 55 mm Are the cylinders fitted with safety valves yes ✓ Are the exhaust pipes and silencers water cooled or lagged with

non-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 funnel

Cooling Water Pumps, No. 3 Salt - 2 fresh water Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes ✓

Bilge Pumps worked from the Main Engines, No. 2 Rotary 35 lpm/hour and 1 duplex 8" x 8" x 10" Can one be overhauled while the other is at work yes ✓

Pumps connected to the Main Bilge Line { No. and Size 2 Rotary 35 lpm/hour and 1 duplex 8" x 8" x 10" How driven Main engines steam driven ✓

Is the cooling water led to the bilges no ✓ If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

arrangements ✓ Ballast Pumps, No. and size one 8" x 8" x 10" Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 rotary 80 lpm/hour

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

Pumps, No. and size:—In Machinery Spaces 2-4"; 1-4" well aft. 1-6"; 2-4" cofferdams 2-2" oil well fuel pump Pump Room fore 2-3" aft 2-3"

In Holds, &c. Fore peak 1-4" Fore hold 3-2" duplank 2-4" fore cofferdam 1-5" aft cofferdam 1-5"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-150 mm and one 7" ✓

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

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

Are all Sea Connections fitted direct on the skin of the ship yes ✓ Are they fitted with Valves or Cocks Values + cocks ✓

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

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

What pipes pass through the bunkers ✓ How are they protected ✓

What pipes pass through the deep tanks ✓ Have they been tested as per Rule ✓

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

Is 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

compartment to another yes ✓ Is the Shaft Tunnel watertight ✓ Is it fitted with a watertight door ✓ worked from ✓

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork ✓

Main Air Compressors, No. ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓

Auxiliary Air Compressors, No. 2 No. of stages 2 Diameters 206-184 mm Stroke 160 mm Driven by 1. Steam engine ✓

Small Auxiliary Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -

What provision is made for first Charging the Air Receivers One auxiliary air compressor steam driven

Scavenging Air Pumps, No. each bottom end of cylinder 650 mm Stroke 1400 mm Driven by Main engine

Auxiliary Engines crank shafts, diameter as per Rule approved as fitted 6" and 95 mm No. 2 Position Motor room.

Have the Auxiliary Engines been constructed under special survey yes ✓ Is a report sent herewith ✓

AIR RECEIVERS:—Have they been made under survey *Yes* State No. of Report or Certificate *2199-2202*

Is each receiver, which can be isolated, fitted with a safety valve as per Rule *Yes*  
Can the internal surfaces of the receivers be examined and cleaned *Yes* Is a drain fitted at the lowest part of each receiver *Yes*

Injection Air Receivers, No. *✓* Cubic capacity of each *✓* Internal diameter *✓* thickness *✓*  
Seamless, lap welded or riveted longitudinal joint *✓* Material *✓* Range of tensile strength *✓* Working pressure *by Rules ✓*  
Actual *✓*

Starting Air Receivers, No. *2* Total cubic capacity *1000 cb feet* Internal diameter *1695 mm* thickness *22 mm*  
Seamless, lap welded or riveted longitudinal joint *welded* Material *SMS* Range of tensile strength *40-53 kg* Working pressure *by Rules approved*  
Actual *3504 BS*

IS A DONKEY BOILER FITTED? *Yes (Two)* If so, is a report now forwarded? *Yes*  
Is the donkey boiler intended to be used for domestic purposes only *Yes*

PLANS. Are approved plans forwarded herewith for Shafting *E 11-2-38* Receivers *E 3-2-38* Separate Fuel Tanks *E 15-5-39*  
(If not, state date of approval) *E 4-10-38*

Donkey Boilers *E 14-2-38* General Pumping Arrangements *E 2-12-38* Pumping Arrangements in Machinery Space *E 2-12-38*  
Oil Fuel Burning Arrangements *E 13-4-39*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes*  
State the principal additional spare gear supplied

*As per separate list*

The foregoing is a correct description,  
**WERKSPOR N.V.**

*Schippers*

Manufacturer.

Dates of Survey while building  
During progress of work in shops -- *May 3-10-31 June 9-16-27 July 16 Sept 2 Oct 3-4-11-21-24-25-26-28 Nov 15-18-23-20 Dec 1-7-12*  
During erection on board vessel -- *Jan 10-20-27 Feb 3-6-7-10-11-14-28-21-24-25-27 March 13*  
Total No. of visits *62*

Dates of Examination of principal parts—Cylinders *24-25-26 Oct* Covers *25-26 Oct* Pistons *30 Nov/Dec* Rods *30 Nov/Dec* Connecting rods *2-6 Feb*  
Crank shaft *May 3-31-Dec 14* Flywheel shaft *18 Jan* Thrust shaft *21 Oct 30 Nov* Intermediate shafts *Nov 30 Feb 17-27* Tube shaft *✓*

Screw shaft *20 Nov/14 Dec* Propeller *21 Feb* Stern tube *24 Dec 18 Feb* Engine seatings *9 May-15 June* Engines holding down bolts *9 May 15 June*  
Completion of fitting sea connections *21 Feb* Completion of pumping arrangements *12 July* Engines tried under working conditions *25 July*

Crank shaft, Material *SMS* Identification Mark *5710-11* Flywheel shaft, Material *✓* Identification Mark *✓*  
Thrust shaft, Material *SMS* Identification Mark *HPB 14-12-38* Intermediate shafts, Material *SMS* Identification Marks *5782*  
Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *SMS* Identification Mark *HPB 3-2-39*

Identification Marks on Air Receivers  
*2199 2202*  
*Lloyd's list Lloyd's list*  
*5504BS 5504BS*  
*WP 3504BS WP 3504BS*  
*KK 30-12-38 KK 5-1-39*

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 *tanher* 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 *No* If so, state name of vessel

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

*The Machinery has been built under special survey, approved plans & Secretary's letters. Material duly tested workmanship throughout good. Tested Machinery whilst on a trial trip on the North sea found working good. She is eligible in my opinion for the approval of the Committee to be recorded in L.M.C. 7-39 oil engine C.T. with continuous survey on owners request in the Society's registerbook.*

The amount of Entry Fee ... *£ 72 -* : When applied for, *3-8-1939*  
Special ... *£ 1276.80* :  
Donkey Boiler Fee ... *£ 350 -* : When received,  
Travelling Expenses (if any) *£ 55 -* : *29-8-1939*

Committee's Minute  
Assigned *+ L.M.C 739 Oil Eng*  
*208 180 lb*

*B. Burdoff*  
Engineer Subeyor to Lloyd's Register of Shipping.



Certificate (if required) to be sent to  
(The Surveyors are requested not to write on or below the space for Committee's Minute.)