

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 15200B

JUN -7 1938

Received at London Office

Date of writing Report 20 May 1938 When handed in at Local Office

19 Port of Amsterdam

No. in Survey held at Amsterdam

Date, First Survey 15 June 1934 Last Survey 20 May 1938

Reg. Book.

Number of Visits 56

Single
on the Twin
Triple
Quadruple } Screw vessel

M.V. OPALIA

Tons { Gross 6195
Net 3596

Built at Amsterdam By whom built Nederl dock Co Yard No. 67 When built 1930

Engines made at Amsterdam By whom made N.V. Werkspoor Engine No. 707 (see letter) When made 1930

Donkey Boilers made at Flushing By whom made Kon Waaks de Schelde Boiler No. 1043 When made 1930

Brake Horse Power 2800 Owners Anglo Saxon Petroleum Co Port belonging to London

Nom. Horse Power as per Rule 377 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which vessel is intended Ocean trade 2576 858

OIL ENGINES, &c.—Type of Engines Diesel outless inject supercharge or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 700 LBS V Diameter of cylinders 650 mm V Length of stroke 1400 V No. of cylinders 6 V No. of cranks 6 V

Mean Indicated Pressure 135 LBS V Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 844 mm V Is there a bearing between each crank yes

Revolutions per minute 120 V Flywheel dia. 2260 V Weight 6000 kg V Means of ignition Spark V Kind of fuel used Diesel oil V

Crank Shaft, { Solid forged dia. of journals as per Rule approved as fitted 460 mm V Crank pin dia. 460 mm V Crank Webs Mid. length breadth 270 mm V Thickness parallel to axis V
Semi built All built as fitted 460 mm V Mid. length thickness 290 mm V Thickness around eyehole V

Flywheel Shaft, diameter as per Rule approved as fitted 500/340 mm V Intermediate Shafts, diameter as per Rule approved as fitted 350 mm V Thrust Shaft, diameter at collars as per Rule approved as fitted 340 mm V

Tube Shaft, diameter as per Rule V Screw Shaft, diameter as per Rule approved as fitted 370 mm V Is the { tube screw } shaft fitted with a continuous liner { C.I. V

Bronze Liners, thickness in way of bushes as per Rule approved as fitted 19.5 mm V Thickness between bushes as per Rule approved as fitted 15 mm V 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 V

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 V

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

shaft no If so, state type V Length of Bearing in Stern Bush next to and supporting propeller 1480 mm V

Propeller, dia. 4270 mm Pitch 3500 mm V No. of blades 4 V Material Bronze whether Moveable no V Total Developed Surface 62 sq. feet

Method of reversing Engines By Air V Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes V Means of lubrication

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

non-conducting material water V 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 V Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes V

Bilge Pumps worked from the Main Engines, No. 2 V Diameter Rotary 35 l/hour V Stroke Can one be overhauled while the other is at work yes V

Pumps connected to the Main Bilge Line { No. and Size 2 rotary 35 l/hour 1 duplex 2" x 2" x 10" V How driven main engine steam driven

Is the cooling water led to the bilges overboard V If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

arrangements V

Ballast Pumps, No. and size 1- 2" x 2" x 10" V Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 12 rotary 40 l/hour V

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

Pumps, No. and size:—In Machinery Spaces 5- 3 1/2" V In Pump Room 2 x 3" V

In Holds, &c. Cofferdam for 1-4" each V Fore hold pump room 5-2" V

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1- 6 5/16" and 1-5" V

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

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

Are all Sea Connections fitted direct on the skin of the ship yes V Are they fitted with Valves or Cocks valves & cocks V

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

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

What pipes pass through the bunkers Suction pipe from cofferdam aft V How are they protected heavy steel pipe with valves chest

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

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

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 V Is the Shaft Tunnel watertight V Is it fitted with a watertight door V worked from V

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

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

Auxiliary Air Compressors, No. 2 V No. of stages 2 V Diameters 206 mm V Stroke 160 mm V Driven by one by steam engine Diesel engine

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

What provision is made for first Charging the Air Receivers 1 Air compr driven by steam engine

Scavenging Air Pumps, No. V Diameter V Stroke V Driven by V

Auxiliary Engines crank shafts, diameter as per Rule approved as fitted 6" V Ruston Hornsby. Kromhout 110 mm V Position Kromhout S.B. Ruston Hornsby Port in Rotterdam

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

AIR RECEIVERS:—Have they been made under survey *Yes* ✓ Are reports or certificates now forwarded *4392, 4393* ✓
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* *✓*
Starting Air Receivers, No. *2* ✓ Total cubic capacity *200 cu. feet* Internal diameter *14.95 in* thickness *2.1 in* ✓
Seamless, lap welded or riveted longitudinal joint *welded* ✓ Material *SMS* ✓ Range of tensile strength *29.75-34* Working pressure *by Rules* *affirmed*
Actual *3504.88* ✓
IS A DONKEY BOILER FITTED? *Yes* ✓ 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 29-137 x 22-4-37* Receivers *E 25-11-1937* ✓ Separate Fuel Tanks *✓*
(If not, state date of approval)
Donkey Boilers *✓* General Pumping Arrangements *E 20-4-37* ✓ Pumping Arrangements in Machinery Space *E 20-4-37* ✓
Oil Fuel Burning Arrangements *E 21-5-30*

SPARE GEAR.

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

As per attached list

The foregoing is a correct description.

WERKSPOR N.V.

Manufacturer.

Dates of Survey while building
During progress of work in shops—*June 15-19 July 19-23 Aug 13-20-20 Sept 7-20-21 Oct 4-14-10 Nov 8-15-23-25-27 Dec 4-11-17-24*
During erection on board vessel—*Jan 8-12-13-14-17-19 Feb 8-12-15-16-18 March 2-3-5*
Total No. of visits *56*

Dates of Examination of principal parts—Cylinders *7 Sept 14 Dec* Covers *14 Dec 12 Feb* Pistons *20 Nov 2-15 Feb* Rods *17 Dec 2-10 Feb* Connecting rods *10 Feb 2 Mar*
Crank shaft *17 Dec 10 Feb* Flywheel shaft *7 Sept 10 Feb* Thrust shaft *4 Dec 19 Jan* Intermediate shafts *21 Feb 26 Oct 10* Tube shaft *✓*
Screw shaft *12-1-30* Propeller *5-3-30* Stern tube *8-1-30 18-2-30* Engine seatings *2-3-30* Engines holding down bolts *10-4-30*
Completion of fitting sea connections *3-3-30* Completion of pumping arrangements *10-5-30* Engines tried under working conditions *✓*
Crank shaft, Material *SMS* Identification Mark *113P.1139* Flywheel shaft, Material *SMS* Identification Mark *24040.5*
Thrust shaft, Material *SMS* Identification Mark *4385* Intermediate shafts, Material *SMS* Identification Marks *4385*
Tube shaft, Material *✓* Identification Mark *4PB 3-1-30* Screw shaft, Material *SMS* Identification Mark *4385*
Is the flash point of the oil to be used over 150° F. *Yes* ✓ Spare *SMS* *4386* *44040.5* *4PB 12-1-30*
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 bunker* 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 *M.V. ONOBA Ans up 15126*

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

The Machinery have been constructed under special survey to approved plans in accordance with the rules. Secretary's letters Material & workmanship good.

Tested engines whilst on her trial trip in the North Sea working good.

She is eligible in our opinion for approval of the Committee to be recorded as I.M.C. 5-30 oil engines C.I. with continuous Survey on request.

The amount of Entry Fee *£60-* When applied for, *4-6-1938*
Special *£970.60*
Donkey Boiler Fee *£102-* When received, *Feb 21-1939*
Travelling Expenses (if any) *£36-* *Feb 21-1939*
Committee's Minute *Feb 21-1939*

Assigned *+dmb 5-38*
S.B.-180th
Al. Lf.

Engineer Surveyor to Board's Register of Shipping.



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