

REPORT ON OIL ENGINE MACHINERY.

Received at London Office

Date of writing Report 6/11 1938 When handed in at Local Office ✓ Port of Helsingfors
 No. in Survey held at Abo Date, First Survey 26/1 Last Survey 15/3 1938.
 Reg. Book. Number of Visits 10

39572 on the Single Screw vessel "OKSYWIE" Tons ^{Gross} 766 _{Net} 342
 Built at Abo By whom built A/B. Eriksson - Vulcan Cy Yard No. 747 When built 1937-38
 Engines made at Stockholm By whom made A/B. Atlas - Diesel Engine No. 85397 When made 1937
 Donkey Boilers made at Newark By whom made Abbat & Co Ltd Boiler No. 586 When made 1937
 Brake Horse Power 800 Owners Fegluga Polska Port belonging to Gdynia
 Nom. Horse Power as per Rule 157 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
 Trade for which vessel is intended ✓

L ENGINES, &c. Type of Engines Polar Diesel Oil Engine 2 ~~or 4~~ stroke cycle 2 Single ~~or double~~ acting single
 Maximum pressure in cylinders 55 kg/cm² Diameter of cylinders 340 mm Length of stroke 570 mm No. of cylinders 5 No. of cranks 5
 Mean Indicated Pressure 7 kg/cm² Is there a bearing between each crank yes
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 484 mm
 Revolutions per minute 250 Flywheel dia. 1530 mm Weight 2580 kg Means of ignition Compression Kind of fuel used Diesel oil
 Crank Shaft, dia. of journals as per Rule Crank pin dia. 220 mm Crank Webs Mid. length breadth 308,3 mm Thickness parallel to axis shrunk
 as fitted 220 mm Mid. length thickness 122 mm Thickness around eye-hole ✓
 Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule
 as fitted 154 mm as fitted 154 mm as fitted 160 mm
 Tube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the tube shaft fitted with a continuous liner Yes
 as fitted 180 mm as fitted 180 mm as fitted 260 mm
 Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes as per Rule Is the after end of the liner made watertight in the
 as fitted 13 and 14 mm as fitted 10 mm 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 in one length
 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 662 mm
 Propeller, dia. 2400 mm Pitch 1480 mm No. of blades 3 Material Cast steel Whether Moveable no Total Developed Surface 2,15 m²
 Method of reversing Engines By compr. air Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication
Jumps Thickness of cylinder liners 25,5 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with
 non-conducting material yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine ---
 Cooling Water Pumps, No. one X-comm. from ballast pump (See dep. plan.) 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. 1 Diameter 100 mm Stroke 140 mm (Double acting) Can one be overhauled while the other is at work ---
 Pumps connected to the Main Bilge Line No. and Size one plunger pump one centrif. pump 36 cm³/h one centrif. pump 45 cm³/h
How driven By Main engine electric driven electric 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 for 45 m³/h Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size one for 21 tons/h
 Are two independent means arranged for circulating water through the Oil Cooler Two pumps Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge
 Pumps, No. and size:—In Machinery Spaces Four 2 1/2" In Pump Room ---
 In Holds, &c. one 2" in tunnel Well, three 2 1/2" in Holds, two 3" in holds 10 2" in copper drain
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Two 3"
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes 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
 Are all Sea Connections fitted direct on the skin of the ship 1 direct, 1 on the tank top Are they fitted with Valves or Cocks Valves
 Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates no Are the Overboard Discharges above or below the deep water line below
 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 no bunkers How are they protected ---
 What pipes pass through the deep tanks no 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 yes Is it fitted with a watertight door yes worked from engine grating
 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. one No. of stages 2 Diameters 175/70 mm Stroke 350 mm Driven by main engine
Auxiliary Air Compressors, No. ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓
Small Auxiliary Air Compressors, No. ✓ No. of stages 2 Diameters ✓ Stroke ✓ Driven by electric driven
Scavenging Air Pumps, No. one Diameter 850 mm Stroke 350 mm Driven by Main Eng.
Auxiliary Engines crank shafts, diameter as per Rule No. ✓
 as fitted ✓ Position ✓



AIR RECEIVERS:—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.*

High Pressure Air Receivers, No. *none* 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 *1600 litres* Internal diameter *650 mm* thickness *14 mm*

Seamless, lap welded or riveted longitudinal joint *Riveted* Material *S.H. Steel* Range of tensile strength *44-50 kg/cm²* Working pressure by Rules *Actual 25 kg/cm²*

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 *for domestic purposes for oil heating and for cleaning of bottom and hull*

PLANS. Are approved plans forwarded herewith for Shafting *18.1.37* Receivers *✓* Separate Fuel Tanks *19.7.37*

Donkey Boilers *Yes.* General Pumping Arrangements *16.2.37.* Pumping Arrangements in Machinery Space *16.2.37.*

Oil Fuel Burning Arrangements *16.2.37.*

SPARE GEAR.

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

State the principal additional spare gear supplied *See the attached Stockholm reports.*

The foregoing is a correct description,

M. J. Rusk
CRICHTON-VULCAN

Manufacturer.

Dates of Survey while building
 During progress of work in shops --
 During erection on board vessel --- *26/1 - 15/3-38*
 Total No. of visits *10*

Dates of Examination of principal parts—Cylinders *✓* Covers *✓* Pistons *✓* Rods *✓* Connecting rods *✓*

Crank shaft *✓* Flywheel shaft *✓* Thrust shaft *✓* Intermediate shafts *11.8.1937* Tube shaft *✓*

Screw shaft *1.8.37.* Propeller *16/12-37* Stern tube *11/12-37* Engine seatings *11/12-37* Engines holding down bolts *11/12-37*

Completion of fitting sea connections *11/12-37* Completion of pumping arrangements *11/12-37* Engines tried under working conditions *15/3-38.*

Crank shaft, Material *✓* Identification Mark *✓* Flywheel shaft, Material *✓* Identification Mark *✓*

Thrust shaft, Material *✓* Identification Mark *✓* Intermediate shafts, Material *S.M. Steel* Identification Marks *no. 1054, 1057, 1058, 1059*

Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *S.M. Steel* Identification Mark *no. 1296*

Is the flash point of the oil to be used over 150° F. *Yes.* Spare screw shaft *no. 1297*

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 *no* 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 *Yes.*

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 workmanship is in my opinion good and in conformity with the Rules.*

Please see the attached copies of reports regarding the oil engines.

*The main and auxiliary engines of this vessel have been built under special survey by the Stockholm Surveyors as per report No. 4599. The engines have been fitted and the installation completed by Messrs H/B Crichton Vule at Åbo under my inspection and to my satisfaction. The spare gears have been checked on board. The main and auxiliary engines have been tested under full working power on a trial trip and found to work satisfactorily. The machinery of this vessel is eligible in my opinion to be classed in the Register Book with record of *LMC 3.38**

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

The amount of Entry Fee .. £	3 : 0 : 0	When applied for,
Special <i>London</i> ... £	3 : 18 : 6	<i>✓</i> 19
Donkey Boiler Fee ... £	3 : 18 : 6	When received,
Travelling Expenses (if any) £	:	<i>27/7 38</i>

Ottian Tolman
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI 6 MAY 1938*
Assigned + due 3.38
50 43 lbs

