

# REPORT ON OIL ENGINE MACHINERY.

No. 2747.

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of writing Report 24<sup>th</sup> Oct. 49. When handed in at Local Office 28<sup>th</sup> Oct. 49. Port of Malmö.  
 in Survey held at Malmö. Date, First Survey 2<sup>nd</sup> March Last Survey 18<sup>th</sup> Oct. 1949.  
 Book Sample. Number of Visits 90.  
 43 on the Single Screw vessel M/T "VENUS".  
 Tons Gross 10606 Net 6205.  
 It at Malmö By whom built Kockums Mekan. V. A. B. Yard No. 345 When built 1949.  
 Engines made at Malmö By whom made Kockums Mekan. V. A. B. Engine No. 626 When made 1949.  
 Key Boilers made at Bothenburg By whom made A. B. Lindholm's Varv Boiler No. 2865/6 When made 1949.  
 Horse Power 6000 Owners Rudolf A. B. Nordström Port belonging to Stockholm.  
 Horse Power as per Rule 1686 = MN Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes.  
 de for which vessel is intended ✓

ENGINES, &c. — Type of Engines MAN. D6 2 72/120 2 or 4 stroke cycle 2 Single or double acting Double.  
 Maximum pressure in cylinders 45 kg. cm<sup>2</sup> Diameter of cylinders 280 mm Length of stroke 1200 mm No. of cylinders 6 No. of cranks 6.  
 Indicated Pressure 5.25 of bearings, adjacent to the crank, measured from inner edge to inner edge 1110 mm Is there a bearing between each crank Yes.  
 Revolutions per minute 110 Flywheel dia. 2468 mm Weight 7700 kg Means of ignition Direct magnet Kind of fuel used Heavy oil.  
 dia. of journals 500 mm Crank pin dia. 500 mm Crank webs Mid. length breadth 800 mm Thickness parallel to axis 320 mm.  
 as fitted 500 as fitted 500 Mid. length thickness 320 Thickness around eyehole 232.5.  
 Wheel Shaft, diameter 500-414 mm Intermediate Shafts, diameter 394 mm Thrust Shaft, diameter at collars 414 mm.  
 as fitted 500-414 as fitted 394 as fitted 414.  
 e Shaft, diameter 458 mm Is the screw shaft fitted with a continuous liner Yes.  
 as fitted 458 as fitted 458 as fitted 458.  
 Size Liners, thickness in way of bushes 23 mm Thickness between bushes 18 mm Is the after end of the liner made watertight in the  
 as fitted 23 as fitted 18 as fitted 18.  
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Yes.  
 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-  
 osive Yes. If two liners are fitted, is the shaft lapped or protected between the liners Yes. Is an approved Oil Gland or other appliance fitted at the after  
 of tube shaft Yes. If so, state type ✓ Length of bearing in Stern Bush next to and supporting propeller 1845 mm.  
 peller, dia. 5460 mm Pitch 4315 mm No. of blades 4 Material Perovskite whether moveable No Total developed surface 9.81 sq. m.  
 Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of  
 ication Forced Thickness of cylinder liners 45 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled  
 igned with non-conducting material Lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned  
 to the engine ✓ Cooling Water Pumps, No. 2 Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes.  
 e Pumps worked from the Main Engines, No. None Diameter ✓ Stroke ✓ Can one be overhauled while the other is at work Yes.  
 ps connected to the Main Bilge Line { No. and size 2-1 of 150 m<sup>3</sup>/H. 1 of 70 m<sup>3</sup>/H. 1 of 180 m<sup>3</sup>/H. In main pump room 1 of 30 m<sup>3</sup>/H.  
 How driven 1 steam & 1 elec. driven Steam driven ✓ Steam driven ✓.  
 re cooling water led to the bilges No, led overboard If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping  
 ngements ✓.  
 ast Pumps, No. and size 1-150 m<sup>3</sup>/H. Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2, each of 180 m<sup>3</sup>/H.  
 two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both main bilge pumps and auxiliary  
 pumps, No. and size:—In machinery spaces 4-90 mm. 2-90 mm. in aft cofferdam. In main pump room 2-90 mm. In pump room fwd. 1-90 mm.  
 olds, &c. 2-90 mm. in dry cargo hold. 2-90 mm. in forward cofferdam.  
 ependent Power Pump Direct Suctions to the engine room bilges, No. and size 2-125 mm.  
 all the bilge suction pipes in holds and tunnel well fitted with strum-boxes Yes. Are the bilge suction in the machinery spaces led from easily  
 ssible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes.  
 all Sea Connections fitted direct on the skin of the Ship Yes. Are they fitted with valves or cocks Roller. Are they fixed  
 iciently 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.  
 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.  
 t pipes pass through the bunkers ✓ How are they protected ✓.  
 t pipes pass through the deep tanks Injection pipes from aft cofferdam Have they been tested as per Rule Yes.  
 all pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times Yes.  
 e 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  
 as, or from one compartment to another Yes. Is the shaft tunnel watertight No tunnel. Is it fitted with a watertight door ✓ worked from ✓.  
 wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork ✓.  
 n Air Compressors, No. None No. of stages ✓ diameters ✓ stroke ✓ driven by ✓.  
 dinary Air Compressors, No. 2 No. of stages 2 diameters 300 & 110 mm stroke 220 mm driven by Aux. oil eng.  
 ll Auxiliary Air Compressors, No. 1 Williams & James No. B. 2058. Size: 4.1 m<sup>3</sup> atm. air/H. driven by Flacke gun.  
 at provision is made for first charging the air receivers Small compressor.  
 venging Air Pumps, No. 2 Tandem diameter 1650 mm stroke 910 mm driven by Main engine.  
 as fitted 170 mm No. 2.  
 Auxiliary Engines crank shafts, diameter 170 Position 1 on port & 1 on starboard side in eng. room.  
 as fitted 170 Is a report sent herewith Yes.

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AIR RECEIVERS:—Have they been made under survey. *Yes* State No. of report or certificate *802.1012.1*

Is each receiver, which can be isolated, fitted with a safety valve as per Rule *Yes see Aux Report.*

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

SPARE Injection Air Receivers, No. *1* Cubic capacity of each *200 lit.* Internal diameter *474 mm* thickness *13 mm*

Seamless, lap welded or riveted longitudinal joint *66. welded* Material *S.M. steel* Range of tensile strength *44.4-47.2 kg. mm<sup>2</sup>* Working pressure *30.0*

Starting Air Receivers, No. *2* Total cubic capacity *20.4 m<sup>3</sup>* Internal diameter *1650 mm* thickness *27 mm*

Seamless, lap welded or riveted longitudinal joint *Painted* Material *S.M. steel* Range of tensile strength *46.5-50.6 kg. mm<sup>2</sup>* Working pressure *30.0*

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 *No*

PLANS. Are approved plans forwarded herewith for shafting *11.3.1948* Receivers *19.11.1948* Separate fuel tanks *14.7.1949*

Donkey boilers *See 802 Rpt. 16835* General pumping arrangements *29.9.1949* Pumping arrangements in machinery space *14.7.1949*

Oil fuel burning arrangements *15.12.1947*

#### SPARE GEAR.

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

State the principal additional spare gear supplied *1 propeller shaft. 1 bronze propeller.*

The foregoing is a correct description,

*KOCKUMS*  
*MEKANISKA VERKEER*

Manufacturer.

Dates of Survey while building During progress of work in shops - - *from 2nd March to 23rd September, 1949.*

During erection on board vessel - - *" 27th July to 18th October, 1949.*

Total No. of visits *90.*

Dates of examination of principal parts—Cylinders *(3 visits)* Covers *(5 visits)* Pistons *31/5.1949* Rods *29/6.43.24/48* Connecting rods *12/11.1949*

Crank shaft *13/8.1949* Flywheel shaft *37/4.1949* Thrust shaft *21/7.1949* Intermediate shafts *21/7.1949* Tube shaft *21/7.1949*

Screw shaft *4/11.1948* Propeller *11/10.1949* Stern tube *2/6.1949* Engine seatings *29/6.1949* Engine holding down bolts *10/9.1949*

Completion of fitting sea connections *29/6.1949* Completion of pumping arrangements *6/10.1949* Engines tried under working conditions *18/10.1949*

Crank shaft, material *S.M. steel* Identification mark *LLLOYD'S 1426-7-8* Flywheel shaft, material *S.M. steel* Identification mark *LLLOYD'S 2365*

Thrust shaft, material *S.M. steel* Identification mark *LLLOYD'S 3299 AB 21.7.49* Intermediate shafts, material *S.M. steel* Identification mark *LLLOYD'S 3082*

Tube shaft, material *S.M. steel* Identification mark *LLLOYD'S 699 BR 4.11.48* Screw shaft, material *S.M. steel* Identification mark *LLLOYD'S 300*

Identification marks on air receivers *No. 1974 & 1975. Lloyd's Test 44 lbs. W.P. 30 lbs. S.B. 3.12.48.*

*SMALL RECEIVER 1984. O.S. 29-12-48 - (E.W.)*

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*

Description of fire extinguishing apparatus fitted *Steam & 5 "Special Steam Engines" app. of 15 liter. each.*

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

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 *Yes* If so, state name of vessel *"BEAUFIGHTER", Rpt. No. 264*

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

*The main and auxiliary oil engines, auxiliary air compressors, pumps, etc. of this vessel have been built under special survey in accordance with the Rules and approved plans.*

*The material fulfil the Rules requirements and the workmanship is good.*

*The shafting as per forging reports enclosed.*

*The machinery of this vessel is eligible, in my opinion, to be classed in the Register Book of this Society with record of *LMC 10.49.**

*Working pressure of donkey boilers 180 lbs./sq. inch. Safety Valves adjusted 170 lbs./sq. inch.*

*Torsional Vibrational Characteristics approved for service speed of 110 RPM strengthened for navigation in ice.*

The amount of Entry Fee ... £ *✓* : *✓* : *✓*

Special ... *Re. 6190.-* When applied for *28.10.1949.*

Donkey Boiler Fee... £ *✓* : *✓* : *✓* When received *19.*

Travelling Expenses (if any) £ *✓* : *✓* : *✓*

(Committee's Minute *subject* *FRI. 25 NOV 1949*

Assigned *+ LMC 10.49/Oil Eng.*

*S.A. 180 lbs. C.L.*