

REPORT ON OIL ENGINE MACHINERY.

No 5333

Received at London Office

- 7 OCT 1941

Date of writing Report 4th Sept. 41 When handed in at Local Office

Part of Stockholm

No. in Ser. Reg. Book. *Stockholm*

Date, First Survey 19.10.39

Last Survey 21.7.1941

Number of Ticks 27

Tons Gross 640 Net 362

on the *Stockholm* "Glan" Screw vessel

Built at *Stockholm* By whom built *A.B. Ekensbergs Varv* Yard No. 177 When built 1941

Engines made at *Stockholm* By whom made *A.B. Atlas-Diesel* Engine No. 85889 When made 1941

Monkey Boilers made at *Norrköping* By whom made *W. Jorderströms F. & W. F.* Boiler No. 1384 When made 1941

Brake Horse Power 650 Owners *Rederi A.B. Grannöcean* Port belonging to *Gothenburg*

Nom. Horse Power as per Rule 125 Is Refrigerating Machinery fitted for cargo purposes *no* Is Electric Light fitted *Yes*

Trade for which vessel is intended

OIL ENGINES, &c. Type of Engines *Polar Diesel Oil Engine, type M44M2 or 4 stroke cycle 2* Single or double acting *single*

Maximum pressure in cylinders *55 kg/cm²* Mean Indicated Pressure *6.35* Diameter of cylinders *340 mm* Length of stroke *570 mm* No. of cylinders *4* No. of cranks *4*

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge *484 mm* Is there a bearing between each crank *Yes*

Revolutions per minute *280* Flywheel dia. *1550 mm* Weight *2600 kg.* Means of ignition *Compression* Kind of fuel used *Diesel Oil*

Crank Shaft, *Solid forged* dia. of journals *935 mm* Crank pin dia. *235 mm* Crank webs *Mid. length breadth 170 mm* *346 mm* Thickness parallel to axis *Mid. length thickness 132 mm* Thickness around eyehole

The flywheel is fitted on the thrust shaft

Flywheel Shaft, diameter *as per Rule* Intermediate Shafts, diameter *as per Rule* Thrust Shaft, diameter at collars *as per Rule* *as fitted 260 mm*

Tube Shaft, diameter *as per Rule* Screw shaft, diameter *as per Rule* *168 mm* Is the tube shaft fitted with a continuous liner *No*

Bronze Liners, thickness in any of bushes *as per Rule* Thickness between bushes *as per Rule* 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 *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-corrosive *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 end of the tube *Yes*

Propeller, dia. *2050 mm* *1335 mm* No. of blades *3* Material *Cast steel* whether Movable *no* Total Developed Surface *1.42 sq. feet*

Method of reversing Engines *By comp. air* Is a governor or other arrangement fitted to prevent racing of the engine when declutched *Yes* Means of lubrication *pumps*

Thickness of cylinder liners *25.5 mm* Are the cylinders fitted with safety valves *Yes* Are the exhaust pipes and silencers lagged with non-conducting material *Yes*

Cooling Water Pumps, No. *Two* 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. *One* Diameter *90 mm* Strokes *140 mm* (Double acting) Can one be overhauled while the other is at work *Yes*

Pumps connected to the Main Bilge Line *One; 18 tons per hour & One; 25.2 tons per hour* By aux. engine *By main engine*

Is the cooling water led to the bilges *no* *one at 315 litres per min. by aux. eng.* By main engine *178 litres per min.*

Ballast Pumps, No. and size *One; 18 tons per hour* Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size *Two; 265 & 200 lit. per min.*

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 *One off 2 1/2" 3 off 3"* *These are also directed to Pump Room*

in Holds, &c. *Dry hold one off 2"* Cofferdams *3 off 2"* in bilge *2"*

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

Are all the Bilge Suction pipes in Holds and Tunnels Well fitted with strum boxes *Yes* Are the Bilge Suctions in the Machinery Spaces

and 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 *no* 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 *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*

Do the pipes pass through the bulkheads *Yes* How are they protected

Do the pipes pass through the deep tanks *Yes* 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 *Is the Shaft Tonnage certificate None fitted* Is it fitted with a watertight door *Yes* worked from

In 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* Diameter *175/70 mm* Stroke *350 mm* Driven by *Main engine*

Auxiliary Air Compressors, No. *One* No. of stages *2* Diameter *95/40 mm* Stroke *125 mm* Driven by *Atlas-eng. E1B. also driving 5kw dynamo & a bilge pump*

Are Auxiliary Air Compressors, No. *One (Double acting)* Diameter *770 mm* Stroke *350 mm* Driven by *Main engine*

Are there any other Engines *Yes* *The Atlas-eng. E1B can be started by hand*



W170-0172 (1/2)

RECEIVERS:—Have they been made under survey

Yes ✓ State No. of Report or Certificate ✓ **7 OCT 1941**
 Is a drain fitted at the lowest part of each receiver Yes ✓
 the internal surfaces of the receivers be examined and cleaned Yes ✓

Number of Air Receivers, No. *None fitted* Cubic capacity of each ✓ Internal diameter ✓ thickness ✓
 less, lap welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength ✓ Working pressure by Rules ✓ Actual ✓
 Single Air Receivers, No. *One* Total cubic capacity *1200 litres* Internal diameter *650 mm* thickness *14 mm*
 less, lap welded or riveted longitudinal joint *riveted* Material *L.W. Steel* Range of tensile strength *41-44 kg/cm²* Working pressure by Rules ✓ Actual *25 kg/cm²*

A DONKEY BOILER FITTED? Yes ✓ If so, is a report now forwarded? Yes ✓
 Is a donkey boiler intended to be used for domestic purposes only
 Are approved plans forwarded herewith for Shafting *E. 23, 36, 39, 37, 20, 40* Receivers *E 9, 35* Separate Fuel Tanks ✓
 (If not, state date of approval)
 No. of Boilers *6, 40* General Pumping Arrangements *2, 41* Pumping Arrangements in Machinery Space *2, 41*
 Fuel Burning Arrangements

SPARE GEAR.

Are the spare gear required by the Rules been supplied Yes. Please see enclosed list. *As per Recd. See Plan. Li. 7/1/42*
 the principal additional spare gear supplied *One screw shaft and one propeller.* ✓

The foregoing is a correct description.

ATLAS DIETRIK
A. B. EKENSBERG'S VARV
Emmanuël Manufacturer.

Notes During progress of work in ships - *19, 7, 21, 39; 30, 5, 19, 15, 10, 2, 9, 12, 25, 15, 21, 7, 40*
 During reception on board vessel - *17, 21, 8, 23, 14, 18, 26, 21, 41*
 Total No. of visits *24*
 Nos. of Examination of principal parts—Cylinders *12, 21, 40* Covers *12, 21, 40* Pistons *12, 21, 40* Rods ✓ Connecting rods *12, 9, 40*
 Crank shaft *30, 5, 40* Flywheel shaft ✓ Thrust shaft *7, 21, 40* Intermediate shafts *11, 40* Tube shaft ✓
 Propeller *25, 40* Stern tube *17, 41* Engine coatings *15, 40* Engines hauling down bolts *23, 41*
 Completion of fitting sea connections *17, 41* Completion of pumping arrangements *26, 41* Engines tried under working conditions *12, 40*
 Crank shaft, Material *L.W. Steel* Identification Mark *LLOYD'S No. 8899 K.A. 5.3.40* Flywheel shaft, Material ✓ Identification Mark ✓
 Thrust shaft, Material *L.W. Steel* Identification Mark *LLOYD'S No. 8863 K.A. 2.12.39* Intermediate shafts, Material *L.W. Steel* Identification Marks *LLOYD'S No. 1493 S. 11.7.40*
 Crank shaft, Material *L.W. Steel* Identification Mark *LLOYD'S No. 9025 K.A. 2.8.40* Screw shaft, Material *L.W. Steel* Identification Mark *LLOYD'S No. 3248 H. 3.3.41*

No. 9073 LLOYD'S TEST 50 KG. W.P. 25 KG. K.A. 12.9.40.	No. 251 LLOYD'S TEST 140 ATM W.P. 70 ATM R. 27.11.22	No. 321 LLOYD'S TEST 140 ATM. W.P. 70 ATM R. 30.11.22
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Is the flash point of the oil to be used over 150° F. Yes ✓
 Are 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 *tanker* If so, have the requirements of the Rules been complied with Yes ✓
 Is 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 *"BEYERLAND"*

General Remarks (State quality of workmanship, opinions as to class, etc.)
 This engine has been built under Special Survey and all the requirements of the Rules have been complied with. The shafting as per forging reports attached. The workmanship is good and the material fulfils the requirements of the Rules. The dimensions are as specified and in accordance with the Rules and approved plans. The whole machinery has been tested on trial trip under full working power and found to work satisfactorily. The machinery of this vessel is eligible in my opinion, to be classed in the Register Book with the notation of *L.M.C. 7.41.*

Amount of Entry Fee .. *£12.57: -* When applied for, *5.9. 1941.*
 Special .. *£ 594: -*
 Donkey Boiler Fee .. *£ 80: -* When received.
 Travelling Expenses (if any) *£ 5.90: -*
 Dittie for Donkey B. *£ 46.25*
 Admittance's Minute

R. J. Andersson
 Resident Surveyor to Lloyd's Register of Shipping.

TUE. 2 DEC 1941
+ dmb. 7.41 oil hg. 07.
S.B. -114th



W170-0172 (2/2)