

REPORT ON OIL ENGINE MACHINERY.

No. 16385.

Received at London Office

Date of writing Report **6th Dec. 1948.** When handed in at Local Office **17th Dec. 1948.** Port of **Gothenburg.**

21 DEC 1948

No. in Survey held at **Gothenburg** Date, First Survey **28th June, 1947** Last Survey **29th November 1948.**

Reg. Book. **90599** on the ~~XXXXXX~~ ~~XXXXXX~~ ~~XXXXXX~~ ~~XXXXXX~~ Screw vessel. "ATLANTIC QUEEN" Number of Visits **92**

Tons Gross **14567** Net **8631**

Built at **Gothenburg** By whom built **A-B. Götaverken** Yard No. **628** When built **1948**

Engines made at **Gothenburg** By whom made **A-B. Götaverken** Engine No. **2074** When made **1948**

Donkey Boilers made at **Stockton** By whom made **Stockton C.E. & R.B. Co., Ltd.** Boiler No. **7046-7** When made **1948**

Brake Horse Power **8200** Owners **Rederi A-B. Monacus** Port belonging to **Kungsbacka**

I.N. Power as per Rule **1582** Is Refrigerating Machinery fitted for cargo purposes. **No** Is Electric Light fitted. **Yes**

Trade for which vessel is intended. **General**

ENGINES, &c. — Type of Engines **Heavy oil, Crosshead type** 2 or 4 stroke cycle. **2** Single or double acting **Single**

Maximum pressure in cylinders **49 kg/cm²** Diameter of cylinders **760 mm.** Length of stroke **1500 mm.** No. of cylinders **9** No. of cranks **9**

Lean Indicated Pressure **6.75 kg/cm²** Ahead Firing Order in Cylinders **1-6-7-3-4-9-2-5-8** Span of bearings, adjacent to the crank, measured from inner edge to inner edge. **970 mm.**

Is there a bearing between each crank **Yes** Revolutions per minute **112**

Flywheel dia. **2368 mm.** Weight **2640 kg.** Moment of inertia of flywheel ~~XXXXXX~~ **19910 Kg.cm.sec²** Means of ignition **Compr.** Kind of fuel used **Diesel oil**

Crank Shaft, ~~XXXXXX~~ ~~XXXXXX~~ ~~XXXXXX~~ ~~XXXXXX~~ dia. of journals **as appd. 520/130 mm.** Crank pin dia **520/105 mm.** Crank webs Mid. length breadth **---** Thickness parallel to axis **320 mm.**

Flywheel Shaft, diameter **as per Rule ---** Intermediate Shafts, diameter **as appd. 430 mm.** Thrust Shaft, diameter at collars **as fitted. 520 mm.**

Tube Shaft, diameter **as per Rule ---** Screw Shaft, diameter **as appd. 500 mm.** Is the ~~XXXXXX~~ shaft fitted with a continuous liner **No**

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 propeller boss. **---**

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner. **---**

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 tube shaft. **Yes**

If so, state type. **Cedervall's ordinary special box No. 23** Length of bearing in Stern Bush next to and supporting propeller **2100 mm.**

Propeller, dia. **5740 mm** Pitch **Variable** No. of blades **4** Material **Bronze** whether moveable. **No** Total developed surface **12.85 sq. Metres**

Moment of inertia of propeller ~~XXXXXX~~ **347500** Kind of damper, if fitted. **None fitted**

Method of reversing Engines **Direct with compr. air** Is a governor or other arrangement fitted to prevent racing of the engine ~~XXXXXX~~ **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

Are they 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. **Led to funnel**

Cooling Water Pumps, No. **2** 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. **None** Diameter **---** Stroke **---** Can one be overhauled while the other is at work. **---**

Pumps connected to the Main Bilge Line { No. and size **1 x 150 tons per hour, 2 x 25 tons per hour, 1 x 50 tons per hour.** How driven **Electrically Electrically Steam**

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 **1 x 150 tons/hour** Power Driven Lubricating Oil Pumps, including spare pump, No. and size **3 x 150 M³ pr 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 x 3", 3 x 3", CD 10-11 1 x 2", CD 26-27 1 x 3", In pump room. Both main: 3 x 3" Forward: 1 x 2"**

In holds, &c. **2 x 2 1/2", CD 1 x 5", FPT 1 x 4". CD 52-53 1 x 4".**

Independent Power Pump Direct Suctions to the engine room bilges, No. and size **1 x 5", 1 x 6 1/2".**

Are all the bilge suction pipes in holds ~~XXXXXX~~ fitted with strum-boxes. **Yes** Are the bilge suction 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. **on tanktop** 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. **Both**

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**

That pipes pass through the bunkers. **No coal bunkers** How are they protected. **---**

That pipes pass through the deep tanks. **Heating coils** Have they been tested as per Rule. **Yes**

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. **ER aft** 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. **None** No. of stages **---** diameters **---** stroke **---** driven by **---**

Auxiliary Air Compressors, No. **2** No. of stages **2** diameters **280/320 mm.** stroke **150 mm.** driven by **El. motors.**

Small Auxiliary Air Compressors, No. **---** No. of stages **---** diameters **---** stroke **---** driven by **---**

What provision is made for first charging the air receivers. **By the electrically driven compressor. Current supplied by steam driven generator/under side of the ME pistons, also one additional piston to each crossh.**

Leaving Air Pumps, No. **9** diameter **360 mm.** stroke **1500** driven by **Main engine**

Auxiliary Engines crank shafts, diameters ~~XXXXXX~~ **approved 190 mm.** No. **2** 5-cyl. oil engines, and 1 steam engine

Have the auxiliary engines been constructed under special survey. **Yes** Position **1 on port, 1 on stbd on the ER floor Steam engine on port side ER floor**

Is a report sent herewith. **Yes**

AIR RECEIVERS:—Have they been made under survey. **Yes** State No. of report or certificate. ---
 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. **None** Cubic capacity of each --- Internal diameter. --- thickness. ---
 Seamless, welded or riveted longitudinal joint. --- Material --- Range of tensile strength --- Working pressure ---
 Starting Air Receivers, No. **2** Total cubic capacity **2 x 14 M³** Internal diameter. **1600-1644 mm** thickness **22 - 22.5 mm**
 Seamless, welded or riveted longitudinal joint. **Riveted** Material **S.M.Steel** Range of tensile strength **45.3-50.5** Working pressure **appd. 25 kg/mm²** Actual **25 kg**

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. **23.7.1946** Receivers. **5.12.1947** Separate fuel tanks. ---
 (If not, state date of approval)
 Donkey boilers. --- General pumping arrangements. **8.8.1947** Pumping arrangements in machinery space. **16.12.1946**
 Oil fuel burning arrangements. ---
 Have Torsional Vibration characteristics been approved. **Yes** **PROVIDED** Date of approval. **23.7.1946**

SPARE GEAR.

Has the spare gear required by the Rules been supplied. **Yes**
 State the principal additional spare gear supplied. **1 screw shaft, 2 exhaust gas valves, 4 spindles and 1 yoke for the same, 1 fuel oil pump and 9 fuel oil pump chests with liners and plungers.**

The foregoing is a correct transcription, and the particulars of the installation as fitted are as approved for torsional vibration characteristics.

AKTIEBOLAGET GÖTAVERKEN

Manufacturer.

Dates of Survey while building
 During progress of work in shops - - **28th June, 1947 - 29th November, 1948.**
 During erection on board vessel - - -
 Total No. of visits **92** **28/5, 14/8, 5-6/10 1948**
 Dates of examination of principal parts—Cylinders **5-6/10 1948** Covers **9-13-24/8.48** Pistons. **2-3/1 1948** Rods. **28/6.1947** Connecting rods **14/10 1948**
 Crank shaft **14/6 1948** Flywheel shaft. --- Thrust shaft. **14/6 1948** Intermediate shafts **3/8 & 29/10. 1948** Tube shaft ---
 Screw shaft **2/7 1948** Propeller. **3/8 1948** Stern tube **26/5 & 1/7 1948** Engine seatings. **31.7.1948** Engine holding down bolts. **18/10 1948**
 Completion of fitting sea connections. **10/8 1948** Completion of pumping arrangements. **25/11.48** Engines tried under working conditions. **10/9 1948**
 Crank shaft, material. **S.M.Steel** Identification mark **LL.No. 221-2 BR 16.10.47** Flywheel shaft, material, --- Identification mark **LL.No. 7 OS 3.8.**
 Thrust shaft, material. **S.M.Steel** Identification mark **LL.No. 223 BR 16.10.47** Intermediate shafts, material. **S.M.Steel** Identification marks **OS 3.8.**
 Tube shaft, material. --- Identification mark --- Screw shaft, material. **S.M.Steel** Identification mark **LL.No. 557 OS 2.7.4**
 Identification marks on air receivers **Nos. 1875-1876 LLOYD'S TEST 39 KGS. WP 25 KGS. SB 9.9.48**

Welded receivers, state Makers' Name. ---
 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 under boilers and ER floor plates, 5 x 15 litres foam fire extinguisher**
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo. --- 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. **Not desired**
 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.)
This machinery has been built under special survey in accordance with the Rules and approved plans has been securely fitted on board under my supervision and to my satisfaction. The workmanship and materials are good and test sheets in respect of the shafting are attached.

Dished ends, manhole doors and compensating rings for the air receivers are of German manufacture marked **LLOYD'S No. 6833 HJ 7.7.44**

Brinell tests and chemical analysis have been carried out with satisfactory results. Shell plates and butt straps made of British material, manufactured by Colvilles, Ltd. Certificates are forwarded under separate cover.
 All pumps for essential services have been examined and tested as required by the Rules.

(Continued)

Exhaust Gas Econ.		
The amount of BODY Fee ...	Kr. 60:00	
Special ...	Kr. 3940:00	When applied for. 17/12 19 48.
Testing of Pumps	Kr. 160:00	
Donkey Boiler Fee...	Kr. 120:00	When received. --- 19 ---
Air Receiver Fee	Kr. 100:00	
Testing of Receivers	Kr. 100:00	
Sunday Fee	Kr. 100:00	

Quistening
 Engineer Surveyor to Lloyd's Register of Shipping

Assigned **+ LMC 11.48 Oil Eng 2 D.B. 150 lb. O.G.**

oil engine machinery of the motor tanker "Atlantic Queen", of Kungälv, No. 90599 in the Register Book.
 The machinery has been tested under full working power conditions on a trial trip and found in order.
 A notice board has been fitted at the control station stating that the engine is not to be run continuously between 30 and 36 revolutions per minute.
 The machinery of this vessel is eligible, in my opinion, to be classed +LMC 11,48 with notations of OG and 2 donkey boilers, boiler pressure 150 lbs. per square inch.

Note:
 At the Builders' request part of the survey was held by the undersigned on Sunday the 28th November, 1948, from 9:00 to 16:00 o'clock.

Quistening

5th Surveyor's Office, Gothenburg.
 Certificates (if required) to be used in the space for Committee's Minute.
 The Surveyors are requested not to write on or show the space for Committee's Minute.

