

# REPORT ON OIL ENGINE MACHINERY.

No. 12615

23 OCT 1939

Received at London Office

Date of report 30th Oct. 1939 When handed in at Local Office 13th Oct. 1939 Port of Gothenburg  
Date, First Survey 24th Oct 1938 Last Survey 8th Oct. 1939

No. in Survey held at Gothenburg Reg. No. 40954 on the Single Triple Quadruple Screw vessel M/S. SALAMIS Tons <sup>Gross</sup> 8286.40 <sub>Net</sub> 4900.77

Built at Gothenburg By whom built A.B. Götaverken Yard No. 535 When built 1939  
Engines made at Gothenburg By whom made do. Engine No. 1348 When made 1939  
Donkey Boilers made at Gothenburg By whom made do. Boiler No. 2070-1 When made 1939  
Break Horse Power 4200 Owners A.S. Salamis Port belonging to Oslo  
Nom. Horse Power as per Rule 653 Is Refrigerating Machinery fitted for cargo purposes no. Is Electric Light fitted yes  
Trade for which vessel is intended Tanker

**OIL ENGINES, &c.**—Type of Engines Heavy oil 2 or 4 stroke cycle 4 Single or double acting Single  
Maximum pressure in cylinders 49 kg/cm<sup>2</sup> Diameter of cylinders 740 mm. Length of stroke 1500 mm. No. of cylinders 8 No. of cranks 8  
Mean Indicated Pressure 8 kg/cm<sup>2</sup> Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 1004 mm. Is there a bearing between each crank yes  
Revolutions per minute 112 Flywheel dia. 2131 mm. Weight 1900 kg Means of ignition Compression Kind of fuel used Diesel oil  
Crank Shaft, <sup>Solid forged</sup> dia. of journals 492/134 mm. as fitted 492/134 mm. Crank pin dia. 492 mm. Crank Webs Mid. length breadth shrunk Thickness parallel to axis 310 mm  
Flywheel Shaft, diameter as per Rule 357 mm. as fitted 360 mm. Thrust Shaft, diameter at collars as per Rule 374 mm. as fitted 375 mm.  
Tube Shaft, diameter as per Rule 392 mm. as fitted 405 mm. Is the shaft fitted with a continuous liner yes

Bronze Liners, thickness in way of bushes as per Rule 19.6 mm. as fitted 21 mm. Thickness between bushes as per Rule 14.7 mm. as fitted 20.5 mm. 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 Tiger fir  
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  
If so, state type yes Length of Bearing in Stern Bush next to and supporting propeller 1560 mm.

Propeller, dia. 4990 mm Pitch 3965 mm. No. of blades 4 Material Brong whether Moveable no Total Developed Surface 9.25 m<sup>2</sup> sq. feet  
Method of reversing Engines Compressed air Is a governor or other arrangement fitted to prevent racing of the engine yes Means of lubrication yes  
Thickness of cylinder liners Top 53.5 mm Bot. 32 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or 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 yes

Cooling Water Pumps, No. 2 @ 3330 lit/min 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 130 mm. Stroke 250 mm. Can one be overhauled while the other is at work yes  
Pumps connected to the Main Bilge Line No. and Size 1 Bilge 30 ton/hr 1 Ballast 100 ton/hr. 1 Bilge 20 ton/hr. How driven Steam engine Steam engine main engine  
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 yes

Ballast Pumps, No. and size 1 @ 100 ton/hr Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 @ 1667 lit/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:—In Machinery Spaces 3 @ 3 1/2" 2 @ 2 1/2" 1 @ 3 1/2" from cofferdam In Pump Room main 3 @ 3 1/2"  
In Holds, &c. Dry cargo hold 2 @ 2 1/2" to steam driven bilge pump in fwd. pump room

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 5" to ballast pump 1 @ 3 1/2" to independent bilge pump  
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 On heavy C.I. stands 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 By lifting small plates 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

What pipes pass through the bunkers no coal bunkers How are they protected yes  
What pipes pass through the deep tanks Heating coils only 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 no tunnel Is it fitted with a watertight door yes worked from yes  
If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork yes

Main Air Compressors, No. none No. of stages 2 Diameters 235/90 mm. Stroke 220 mm. Driven by Aux. oil engine  
Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 320-280 mm. Stroke 150 mm. Driven by Steam engine  
Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 320-280 mm. Stroke 150 mm. Driven by Steam engine  
What provision is made for first Charging the Air Receivers Steam driven manoeuvring air compressor

Scavenging Air Pumps, No. none Diameter 139 mm. Stroke 150 mm. Driven by 1 oil engine & 1 steam engine  
Auxiliary Engines crank shafts, diameter as per Rule 139 mm. as fitted 150 mm. Position P. side E.R. platform  
Have the Auxiliary Engines been constructed under special survey yes Is a report sent herewith yes for oil engine

244 according to amended plan of 1938

**AIR RECEIVERS:**—Have they been made under survey Yes State No. of Report or Certificate 4470448  
 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, lap welded or riveted longitudinal joint \_\_\_\_\_ Material \_\_\_\_\_ Range of tensile strength \_\_\_\_\_ Working pressure \_\_\_\_\_  
**Starting Air Receivers, No.** 2 Total cubic capacity 2x13.5 m<sup>2</sup> Internal diameter 1850 mm thickness 25 & 26.5 mm  
 Seamless, lap welded or riveted longitudinal joint Riveted Material S.M. Steel Range of tensile strength 44/50 kg/cm<sup>2</sup> Working pressure \_\_\_\_\_  
 by Rules 25.1 kg/cm<sup>2</sup>  
 Actual 25 kg/cm<sup>2</sup>

**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 4-4-39 Receivers 8-8-37 Separate Fuel Tanks 5-1-39  
 (If not, state date of approval)  
 Donkey Boilers 27-5-38 General Pumping Arrangements 6-8-37 Pumping Arrangements in Machinery Space 6-8-37  
 Oil Fuel Burning Arrangements ✓

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied Yes  
 State the principal additional spare gear supplied For the main eng: 2 fuel needle valves, 6 exhaust valves, 1 telescopic cooling pipe with flange, 1 fuel oil pump with links, 1 top half of crank pin bushes, 2 halves of main bearing bushes and 1 propeller shaft with nut.

The foregoing is a correct description,

**ARTIEBOLAGET GOTAVERKEN**

Manufacturer.

Dates of Survey while building  
 During progress of work in shops-- 1938. Oct 24, Nov 22, Dec 20, 31, 1939 Jan 13, 18, 28, Feb 4, 13, 17, Mar 23, 27, 31 April 11, 14, 20, 21, 24, May 2, 4, 11, 13, 15, 16, 26, June 19, 20, 21, July 3, 11, 12, 14, 15, 17, 18, 19, 23, 25, 27, 28, 31  
 During erection on board vessel-- 1939. July 19, 24, 25, 28, 29, Aug. 16, Sept 2, 15, 18, 20, 22, 23, 25, 27, 28, Oct 3, 4, 6  
 Total No. of visits 61

Dates of Examination of principal parts—Cylinders 19, 20, 21-6-39 Covers 19, 20, 21-6-39 Pistons 26-5-39 Rods 26-5-39 Connecting rods 20-6-39  
 Crank shaft 13-5-39 Flywheel shaft ✓ Thrust shaft 3-8-39 Intermediate shafts 21-4-39 Tube shaft ✓  
 Screw shaft 20-4-39 Propeller 15-9-39 Stern tube 8-6-39 Engine seatings 20-6-39 Engines holding down bolts 28-7-39  
 Completion of fitting sea connections 20-6-39 Completion of pumping arrangements 3-10-39 Engines tried under working conditions 20-4-39

Crank shaft, Material S.M. Steel Identification Mark LLOYD No 3324-5-6 Flywheel shaft, Material \_\_\_\_\_ Identification Mark \_\_\_\_\_  
 Thrust shaft, Material S.M. Steel Identification Mark LLOYD No 630 Intermediate shafts, Material S.M. Steel Identification Marks S.T. 21-4-39  
 Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material S.M. Steel Identification Mark LLOYD No. 395  
 Identification Marks on Air Receivers LLOYD No 4470448 Spare screw shaft LLOYD No 1209  
T.P. 40 kg/cm<sup>2</sup>  
W.P. 25 kg/cm<sup>2</sup>  
HBS 25-5-39  
S.T. 20-4-39

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  
 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 Yes If so, state name of vessel M.S. NIKE got Rpt No. 12495

**General Remarks** (State quality of workmanship, opinions as to class, &c. The main & auxiliary machinery of this vessel have been constructed under special survey in accordance with the Rules & approved plans.

The workmanship & materials are good.  
The shafting as per foregoing reports attached.  
The machinery has been fitted in the vessel under my supervision & to my satisfaction, and has been tested on a trial trip & found in order.  
The machinery of this vessel is eligible in my opinion to be classed  
+ LMC 10-39, CL, 2DB 150 lb.

The amount of Entry Fee .. Kr. 114 : 00 : When applied for, 13th Oct. 1939  
 Special ... Kr. 2045 : 35  
 Starting Air Receivers ... Kr. 159 : 60 : When received, 25. 10. 1939  
 Donkey Boiler Fee ...  
 Travelling Expenses (if any) £ ✓ :

H.B. Liger  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 27 OCT 1939  
 Assigned + LMC 10. 39 Oil by G.  
2 DB-150 lb.



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