

REPORT ON OIL ENGINE MACHINERY.

No. 12615

23 OCT 1939

Received at London Office

Date of report 27th Oct. 1939 When handed in at Local Office 13th Oct. 1939 Port of Göteborg
 Date, First Survey 24th Oct 1938 Last Survey 8th Oct. 1939
 Number of Visits

No. in Survey held at Göteborg
 Reg. No. 40954 on the Single Temp Triple Quadruple Screw vessel M/S. SALAMIS
 Tons ^{Gross} 8286.40 _{Net} 4900.77

Built at Göteborg By whom built A.B. Götaverken Yard No. 535 When built 1939
 Engines made at Göteborg By whom made do. Engine No. 1348 When made 1939
 Donkey Boilers made at Göteborg By whom made do. Boiler No. 2070-1 When made 1939
 Brake 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/cm² (29½") Diameter of cylinders 740 mm. (29½") Length of stroke 1500 mm. (59½") No. of cylinders 8 No. of cranks 8
 Mean Indicated Pressure 8 kg/cm² 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 Turning Wheel dia. 2131 mm. Weight 1900 kg Means of ignition Compression Kind of fuel used Diesel oil
 Crank Shaft, ^{Solid forged} dia. of journals as per Rule 492/134 mm. ^{as per Rule} 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. Intermediate Shafts, diameter as per Rule 360 mm. Thrust Shaft, diameter at collars as per Rule 374 mm.
 Tube Shaft, diameter as per Rule 392 mm. Is the shaft fitted with a continuous liner yes
 Screw Shaft, diameter as per Rule 405 mm. Is the shaft fitted with a continuous liner yes
 Bronze Liners, thickness in way of bushes as per Rule 19.6 mm. Thickness between bushes as per Rule 14.7 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
 Propeller, dia. 4990 mm Pitch 3965 mm. No. of blades 4 Material Brong whether Moveable no Total Developed Surface 9.25 m² 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 Bottom 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 Bilge 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 @ 3½" 2 @ 2½" 1 @ 3½" from cofferdam In Pump Room main 3 @ 3½"
 In Holds, &c. Dry cargo hold 2 @ 2½" 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 @ 3½" 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 yes
 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 Values
 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
 What provision is made for first Charging the Air Receivers Steam driven manoeuvring air compressor
 Scavenging Air Pumps, No. none Diameter 139 mm. Stroke 1 oil engine 91 steam engine
 Auxiliary Engines crank shafts, diameter as per Rule 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
 approved 7-5-38

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 by Rules

Starting Air Receivers, No. *2*

Total cubic capacity *2x13.5 m³*

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/cm²*

Working pressure by Rules *25.1 kg/cm²*

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 *No*

PLANS. Are approved plans forwarded herewith for Shafting *4-4-39*

Receivers *8-8-37*

Separate Fuel Tanks *5-1-39*

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,

ARTIE BOLAGET GOTAVERKEN

Manufacturer. *[Signature]*

Dates of Survey while building
During progress of work in shops-- *1938. Oct 24, Nov. 22, Dec 20, 21, 1939 Jan 13, 18, 20, 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, 30, 31, 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 384-5-6*

Flywheel shaft, Material

Identification Mark *LLOYD No 454*

Thrust shaft, Material *S.M. Steel*

Identification Mark *LLOYD No 430*

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

T.P. *40 kg/cm²*

W.P. *25 kg/cm²*

HBS *25-5-39*

Spare screw shaft

LLOYD No 1209

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, 200 150 lb.

The amount of Entry Fee .. *Kr. 114 : 00*

Special ... *Kr. 2045 : 35*

Starting Air Receivers ... *Kr. 159 : 60*

Donkey Boiler Fee ... *Kr. 159 : 60*

Travelling Expenses (if any) £ *✓*

When applied for, *13th Oct. 1939*

When received, *25. 10. 1939*

H.B. Liger

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

*+ LMC 10. 39 Oil Eng. CL
2 DR-150 lb*



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