

REPORT ON OIL ENGINE MACHINERY.

No. 11387.

25 AUG 1945

Received at London Office

1945 *March 4* When handed in at Local Office 19 *Port of Copenhagen*
 Date, First Survey *24 May 1939* Last Survey *31 March 1941*
 Number of Visits *54*
 on the *Single* Screw vessel *"HENNING MERSK" Renamed HYDRA* Tons Gross *9842* Net *5912*
 at *Copenhagen* By whom built *L. Skovsbo Skibsværft* Yard No. *93* When built *1941*
 By whom made *A. B. Bumsen & Wain* Engine No. *3060* When made *1941*
 By whom made *A. B. Bumsen & Wain* Boiler No. *1976-77* When made *1941*
 Horse Power *4250* Owners *2/5 of 1912 2/5 of Smedborg* Port belonging to *Copenhagen*
 Horse Power as per Rule *735* Is Refrigerating Machinery fitted for cargo purposes *no* Is Electric Light fitted *yes*
 for which vessel is intended *carrying Petroleum in bulk, ocean going.*

ENGINES, 8c. Type of Engine *Vertical Diesel engine* 2 or 4 stroke cycle *4* Single or double acting *single*
 Mean pressure in cylinders *49 kg/cm²* Diameter of cylinders *740 mm* Length of stroke *1500 mm* No. of cylinders *9* No. of cranks *9*
 Indicated Pressure *7 kg/cm²* Flywheel *4000 kgm²* Weight *24200 kg* Means of ignition *Compression* Kind of fuel used *Heavy oil*
 of bearings, adjacent to the Crank, measured from inner edge to inner edge *1026 mm* Is there a bearing between each crank *yes*
 Reversing Engines *direct* Is a governor or other arrangement fitted to prevent racing of the engine *yes* Means of lubrication *to pumps*
 Thickness of cylinder liners *53.5 mm* Are the cylinders fitted with safety valves *yes* Are the exhaust pipes and silencers water cooled or lagged with *lagged*
 If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine *to pumps*
 Water Pumps, No. *1* Diameter *100 mm* Stroke *30 mm* Can one be overhauled while the other is at work *yes*
 connected to the Main Bilge Line *How driven* *chain from main engine* *Steam* *Steam*
 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 *no*

Pumps, No. and size *1 off 150 h/p* Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size *1 off 170 h/p (main eng) 1 off 130 h/p (Steam)*
 independent means arranged for circulating water through the Oil Cooler *yes* Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge *yes*
 No. and size:—In Machinery Spaces *3 off 3 1/2" - 1 off 2" from coffee room* In Pump Room *1 off 3"*
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *2 off 6" - 2 off 4"*
 the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes *yes* Are the Bilge Suctions in the Machinery Spaces *yes*
 easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges *yes*
 Connections fitted direct on the skin of the ship *yes* Are they fitted with Valves or Cocks *valves*
 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*
 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*
 pass through the bunkers *no* How are they protected *no*
 pass through the deep tanks *no* Have they been tested as per Rule *no*

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times *yes*
 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 *yes*
 ment to another *yes* Is the Shaft Tunnel watertight *no* Is it fitted with a watertight door *no* worked from *no*
 and vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork *no*

Air Compressors, No. *2 off 2.83 m³ each* No. of stages *2* Diameters *Revel Type CSA 7* Stroke *100 mm* Driven by *Steam engine*
 Auxiliary Air Compressors, No. *1* No. of stages *1* Diameters *100 mm* Stroke *100 mm* Driven by *Steam engine*
 precision is made for first Charging the Air Receivers *Steam driven compression*
 using Air Pumps, No. *1* Diameter *100 mm* Stroke *100 mm* Driven by *Steam engine*
 Auxiliary Engines crank shafts, diameter *71.5 mm* No. *1 off Diesel - 1 off Steam*
 Auxiliary Engines crank shafts, diameter *95 mm* Position *for the engine room*
 Auxiliary Engines been constructed under special survey *Yes Diesel one - yes* 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. *✓* 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. *one* Total cubic capacity *25 cu³* Internal diameter *1878 in* thickness *24 in*

Seamless, lap welded or riveted longitudinal joint *✓* Material *S. Cl. Steel* Range of tensile strength *47.5 kg/cm²* Working pressure *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 *yes* Receivers *yes* Separate Fuel Tanks *yes*

Donkey Boilers *yes* General Pumping Arrangements *yes* Pumping Arrangements in Machinery Space *yes*

Oil Fuel Burning Arrangements *no* **SPARE GEAR.**

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

State the principal additional spare gear supplied *-*

ARTISERLSKABET
NAUTISKE SKIBSVERFT
The following is a description,
Purkman Manufacturer.

Dates of Survey while building

During progress of work in shops -	24/5-2/6-24/6-24/6-29/6-17/7-2/7-2/8-7/8-10/8-17/8-19/8-22/8-24/8-24/8-29/8-7/9-9/9-12/9-14/9-16/9-20/9
During erection on board vessel -	2/10-5/10-12/10-22/10-27/10-30/10-8/11-9/11-10/11-16/11-19/11-31/11-19/1-8/2-22/2-4/3
Total No. of visits	54

Dates of Examination of principal parts—Cylinders 28/8-29/8 Covers 28/8-29/8 Pistons 20/9-21/9 Rods 24/6-17/7-20/9 Connecting rods 24/6-17/7

Crane shaft 24/8-20/9 Flywheel shaft 19/7 Thrust shaft 7/8-19/8-10/11 Intermediate shafts 3/10-5/10-22/2 Tube shaft 20/4-27/10

Screw shaft 2/10-5/10-24/2-2/4 Propeller 19/7 Stern tube 9/11-16/11-22/2-18/3 Engine sealings 22/2-6/3-18/3-20/4-30/4 Engines holding down bolts 27/10-30/4

Completion of fitting sea connections 18/3-29/3 Completion of pumping arrangements 3/4-12/4-30/4-7/5-3/11 Engines tried under working conditions 27/10-30/4

Crane shaft, Material *S. Cl. P. Steel* Identification Mark *LLOYD'S NO 4934-35* Flywheel shaft, Material *S. Cl. P. Steel* Identification Mark *LLOYD'S NO 4959*

Thrust shaft, Material *S. Cl. P. Steel* Identification Mark *LLOYD'S NO 5007* Intermediate shafts, Material *S. Cl. P. Steel* Identification Marks *4 22*

Tube shaft, Material *-* Identification Mark *-* Screw shaft, Material *S. Cl. P. Steel* Identification Mark *LLOYD'S NO 4960*

Identification Marks on Air Receivers *LLOYD'S TEST*

41 ATM

W.P. 25 ATM

4 8 2 40

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 *no* If so, state name of vessel *-*

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.) *The machinery as described has been constructed and fitted under special survey in accordance with the Rules, the approved plans and the requirements contained in the Secretary's letters.*

The material used in construction has been tested as required by the Rules and the workmanship is good.

Recommend the vessel to have notation in the Register Books of

45 LMC-1141 - OIL ENGINE - C.L and 2 DB-180 lbs subject to the machinery

the electric installations being satisfactorily tested under working conditions

and the safety valves on the donkey boilers being adjusted under steam

The amount of Entry Fee ... *135.00* : When applied for, *6.11.19*

Special ... *2532.00* : When received, *19*

Starting air main ... *100.00*

Donkey Boiler Fee ... *300.00*

Travelling Expenses (if any) ... *241.35*

Committee's Minute

Assigned

See minute on p. 10

Christoffer J. Langkilde
Engineer Surveyor Lloyd's Register of Shipping