

REPORT ON OIL ENGINE MACHINERY.

No. 93354

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 Date of writing Report 13-12-1928 When handed in at Local Office 10 Port of London
 No. in Survey held at London Date, First Survey 9th Aug 1928 Last Survey 1st Dec. 1928
 Reg. Book. Number of Visits FOUR
 on the ^{Single} ~~Twin~~ ^{Triple} ~~Quadruple~~ Screw vessel *Mohr Kessel "ELKHOUND"* Tons ^{Gross} 684 ^{Net} 201
 Built at Bristol By whom built C. Hill & Sons Ltd Yard No. 173 When built 1929
 Engines made at Augsburg By whom made M. A. N. Engine No. 10355 When made 1918
 Donkey Boilers made at Hicken By whom made Spencer Hopwood & Co. Ltd Boiler No. 9738 When made 1929
 Brake Horse Power 550 Owners Channel Tankers Ltd Port belonging to London
 Nom. Horse Power as per Rule 226 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Trade for which vessel is intended *coasting*

IL ENGINES, &c.—Type of Engines *M. A. N. Diesel Engines* 2 or 4 stroke cycle 4 Single or double acting *Single*
 Maximum pressure in cylinders *35 kg/cm²* Diameter of cylinders *13 1/4* 3507 Length of stroke *13 1/4* 3507 No. of cylinders 6 No. of cranks 6
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge *3807* Is there a bearing between each crank *Yes*
 Revolutions per minute *456* 450 Flywheel dia. *2-6"* Weight *2 tons* Means of ignition *Compression* Kind of fuel used *Oil*

Crank Shaft, dia. of journals *1907* as per Rule *1907* as fitted Crank pin dia. *1907* as fitted Crank Webs Mid. length breadth *3107* Mid. length thickness *857* Kind of fuel used *Oil* Thickness parallel to axis *Yes* Thickness around eye-hole *Yes*

Flywheel Shaft, diameter *3 1/8* as per Rule *3 1/8* as fitted Intermediate Shafts, diameter *3 1/8* as per Rule *3 1/8* as fitted Thrust Shaft, diameter at collars *5 1/2* as per Rule *5 1/2* as fitted

Tube Shaft, diameter *5 1/2* as per Rule *5 1/2* as fitted Screw Shaft, diameter *5 1/2* as per Rule *5 1/2* as fitted Is the ^{tube} ~~screw~~ shaft fitted with a continuous liner *Yes*

Bronze Liners, thickness in way of bushes *Yes* as per Rule *Yes* as fitted Thickness between bushes *Yes* as per Rule *Yes* as fitted 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 shaft *Yes* Length of Bearing in Stern Bush next to and supporting propeller *2' 0 3/8*

Propellers, dia. *6' 3"* Pitch *4 1/2* No. of blades 3 Material *Bronze* whether Moveable *No* Total Developed Surface *13/3* sq. feet

Method of reversing Engines *Hand gear* Is a governor or other arrangement fitted to prevent racing of the engine when declutched *Yes* Means of lubrication *Forced*

Thickness of cylinder liners *25% - 17%* 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 *Upward*

Cooling Water Pumps, No. *Twin plungers* 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 *4x4x5* Stroke *4x4x5* Can one be overhauled while the other is at work *Yes*

Pumps connected to the Main Bilge Line { No. and Size *Two 4x4x5* How driven *Steam* *One cumulating pump coupling to bilge line through 2 inch valve* *Of hand pump*

Ballast Pumps, No. and size *One 4x4x5* Lubricating Oil Pumps, including Spare Pump, No. and size *One 4x4x5* *One 4x4x5*

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 *3-2-2* In Holds, &c. *None*

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *One - 2 1/2*

Are all the Bilge Suction pipes in Holds and Tanker 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 *Yes* 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 *Below*

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 *None* How are they protected *Yes*

What pipes pass through the deep tanks *No air tank* 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 *Yes* 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. *One* No. of stages 4 Diameters *255, 225, 80 1/2* Stroke *1707* Driven by *Direct*

Auxiliary Air Compressors, No. *One* No. of stages 4 Diameters *7x4x13/4* Stroke *5 1/2* Driven by *Steam*

Small Auxiliary Air Compressors, No. *None* No. of stages *—* Diameters *—* Stroke *—* Driven by *—*

Scavenging Air Pumps, No. *None* Diameter *—* Stroke *—* Driven by *—*

Auxiliary Engines crank shafts, diameter *—* as per Rule *—* as fitted

IR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule *None*

Can the internal surfaces of the receivers be examined *Yes* What means are provided for cleaning their inner surfaces *Angus*

Is there a drain arrangement fitted at the lowest part of each receiver *Yes*

High Pressure Air Receivers, No. *2* *2 Blast* Cubic capacity of each *380 & 40 litres* Internal diameter *4107* thickness *12 1/2*

Seamless, lap welded or riveted longitudinal joint *Seamless* Material *—* Range of tensile strength *—* Working pressure by Rules *80 kg/cm²*

Starting Air Receivers, No. *Two* Total cubic capacity *6x380-litre* Internal diameter *4107* thickness *12 1/2*

Seamless, lap welded or riveted longitudinal joint *—* Material *—* Range of tensile strength *—* Working pressure by Rules *—*

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IS A DONKEY BOILER FITTED?

Yes. Two

If so, is a report now forwarded?

Yes

PLANS. Are approved plans forwarded herewith for Shafting

Yes

Receivers

No

Separate Tanks

No

Donkey Boilers

Yes

General Pumping Arrangements

Yes

Oil Fuel Burning Arrangements

SPARE GEAR

The whole of the spare gear required by the Rules has been supplied & considerable additional gear a list is attached

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1929 June 14, 21, July 2, 10, 11, 18, 20, 22, 29, Aug: 6, 15, 16, 17, 20, 29, Sept. 11, 16, 19, 26, Oct 8, 9, 20.
During erection on board vessel - -
Total No. of visits

Dates of Examination of principal parts - Cylinders Covers Pistons Rods Connecting rods

Crank shaft Flywheel shaft Thrust shaft 5.24.6.29 Intermediate shafts Tube shaft

Screw shaft 3.6.29 Propellers Stern tubes 7.6.29 Engine seatings 21.6.29 Engines holding down bolts 10.7.29

Completion of fitting sea connections 22.5.29 Completion of pumping arrangements 15.10.29 Engines tried under working conditions 15.10.29

Crank shaft, Material Identification Mark Lloyd's Lloyd's Flywheel shaft, Material Identification Mark

Thrust shaft, Material Lloyd's Lloyd's Identification Mark 1515 1516 Intermediate shafts, Material Identification Marks

Tube shaft, Material Identification Mark Lloyd's Lloyd's Identification Mark 1513 1514

Is the flash point of the oil to be used over 150° F.

Is this machinery duplicate of a previous case If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)

These engines were built in Augsburg and have not previously been used. They have been opened up and examined throughout and found in good condition, the cranks shafts are of the size approved in the Secretary's letter dated 2nd Aug 1928. The air receivers will be tested by hydraulic pressure at Bristol; they have been examined internally & found in good condition and the scantlings are as approved in the Secretary's letter 11th Dec 28.

The machinery is eligible in my opinion to be fitted to a Classed vessel and assigned a Notation L.P.C. without the distinguishing +. It is being despatched to Bristol to be fitted on board.

The local surveyors have been advised.

The amount of Entry Fee ... 4 0

Special ... 20 0 0

Donkey Boiler Fee ... 3 15

Travelling Expenses (if any) ... 3 15

Committee's Minute TUE. 12 NOV 1929

Assigned

L.M.C. 10.29 (Oil Engines)
09. 20 B. 120 lbs

CERTIFICATE WRITTEN



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