

REPORT ON OIL ENGINE MACHINERY

No. 3106.

Received at London Office

16 MAY 1929

Date of writing Report 13 May 1929 When handed in at Local Office Stockholm Port of Stockholm
 Date, First Survey 4 Sept. 1928 Last Survey 10 May 1929
 Number of Visits 5
 on the Single Screw vessel Tons Gross
Twin Triple Quadruple Net
 Built at Malmo By whom built Kockums Mekanismiska Verkstads AB Yard No. 161 When built
 Engines made at Stockholm By whom made Mehel. Hus-Loesel Engine No. 85099 When made 1929
 Donkey Boilers made at _____ By whom made _____ Boiler No. _____ When made _____
 Brake Horse Power 200 Owners Stockholms Rederiaktiebolag Svea Port belonging to Stockholm
 Nom. Horse Power as per Rule 68 Is Refrigerating Machinery fitted for cargo purposes _____ Is Electric Light fitted _____
 Trade for which vessel is intended _____

MAIN ENGINES, &c.—Type of Engines Stationary Diesel Oil Engine (Type R241) 2 or 4 stroke cycle Single or double acting
 Maximum pressure in cylinders 35 kg/cm² Diameter of cylinders 250 mm. Length of stroke 420 mm. No. of cylinders 4 No. of cranks 4
 Position of bearings, adjacent to the Crank, measured from inner edge to inner edge 326 mm. Is there a bearing between each crank yes
 Revolutions per minute 300 Flywheel dia. 1400 mm. Weight 1350 kg. Means of ignition compression Kind of fuel used heavy Oil
 Crank Shaft, dia. of journals as per Rule 147 mm. Crank pin dia. 160 mm. Crank Webs Mid. length breadth 214 mm. Thickness parallel to axis shrunk
the flywheel is fixed on the crankshaft as per Rule 160 Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule
as fitted as fitted as fitted as fitted
 Propeller Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the tube screw shaft fitted with a continuous liner as fitted
as fitted as fitted as fitted

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
as fitted as fitted as fitted
 Propeller boss If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner
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
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 the tube shaft Length of Bearing in **Stern Bush** next to and supporting propeller _____

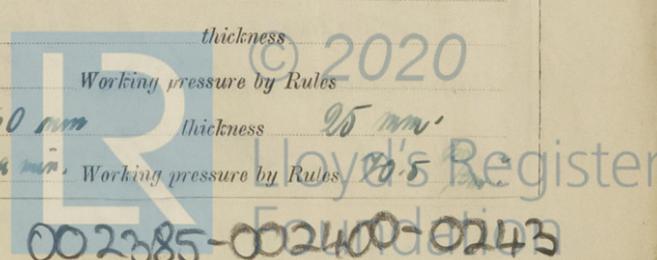
PROPELLER, dia. _____ **Pitch** _____ **No. of blades** _____ **Material** _____ **whether Moveable** _____ **Total Developed Surface** _____ **sq. feet**
Method of reversing Engines Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication
are provided Thickness of cylinder liners 23 mm. Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with
non-conducting material If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine
Boiling Water Pumps, No. 1 Is the sea suction provided with an efficient strainer which can be cleared within the vessel
Large Pumps worked from the Main Engines, No. _____ **Diameter** _____ **Stroke** _____ Can one be overhauled while the other is at work
Pumps connected to the Main Bilge Line No. and Size _____ How driven _____

WATER PUMPS, No. and size _____ **Lubricating Oil Pumps, including Spare Pump, No. and size** _____
 Are two independent means arranged for circulating water through the **Oil Cooler** _____ **Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge**
Pumps, No. and size:—In Machinery Spaces _____
Holds, &c. _____

DEPENDENT POWER PUMP DIRECT SUCTIONS to the Engine Room Bilges, No. and size _____
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes. _____ Are the Bilge Suctions in the Machinery Spaces
 _____ from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges _____
 Are all **Sea Connections** fitted direct on the skin of the ship. _____ Are they fitted with Valves or Cocks _____
 Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates. _____ Are the Overboard Discharges above or below the deep water line
 _____ Are they each fitted with a Discharge Valve always accessible on the plating of the vessel _____ Are the Blow Off Cocks fitted with a spigot and brass covering plate
 _____ How are they protected _____
 Are all pipes that pass through the deep tanks _____ Have they been tested as per Rule _____

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times _____
 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 _____ Is the Shaft Tunnel watertight _____ Is it fitted with a watertight door _____ worked from _____
 On 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 fitted **No. of stages** _____ **Diameters** _____ **Stroke** _____ **Driven by** _____
Auxiliary Air Compressors, No. _____ **No. of stages** _____ **Diameters** _____ **Stroke** _____ **Driven by** _____
Small Auxiliary Air Compressors, No. _____ **No. of stages** _____ **Diameters** _____ **Stroke** _____ **Driven by** _____
Revolving Air Pumps, No. 2 **Diameter** 390 mm. **Stroke** 120 mm. **Driven by** Engine
Auxiliary Engines crank shafts, diameter as per Rule _____ as fitted _____

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule yes
 Are the internal surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces mudhole 200 mm.
 Is there a drain arrangement fitted at the lowest part of each receiver yes
High Pressure Air Receivers, No. _____ **Cubic capacity of each** _____ **Internal diameter** _____ **thickness** _____
 Are all, lap welded or riveted longitudinal joint _____ **Material** _____ **Range of tensile strength** _____ **Working pressure by Rules** _____
Working Air Receivers, No. one **Total cubic capacity** 320 litres **Internal diameter** 460 mm **thickness** 25 mm.
 Are all, lap welded or riveted longitudinal joint lap welded **Material** D. H. Steel **Range of tensile strength** 38 kg/cm² **Working pressure by Rules** _____



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting *E 22 Nov. 1928* Receivers *25.5.27* Separate Tanks

Donkey Boilers _____ General Pumping Arrangements _____ Oil Fuel Burning Arrangements _____

SPARE GEAR *To be supplied and inspected when machinery is being fitted in ship.*

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building

- During progress of work in shops - - *4/9, 31/10 28, 30, 11/3 & 10/5 29*
- During erection on board vessel - - -
- Total No. of visits *in shop 5*

Dates of Examination of principal parts—Cylinders *30/11 29* Covers *30/11 29* Pistons *11/3 29* Rods - Connecting rods *31/10 28*

Crank shaft *4/9 28, 11/3 29* Flywheel shaft Thrust shaft Intermediate shafts Tube shaft

Screw shaft Propeller Stern tube Engine sealings Engines holding down bolts

Completion of fitting sea connections Completion of pumping arrangements Engines tried under working conditions *in shop*

Crank shaft, Material *A.N. Steel* Identification Mark **LLOYD'S N:0 8361 V.B.4.9.28.A** Flywheel shaft, Material Identification Mark

Thrust shaft, Material Identification Mark Intermediate shafts, Material Identification Marks

Tube shaft, Material Identification Mark Screw shaft, Material Identification Mark

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

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with

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

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.)

I am of opinion that this engine is of superior material and workmanship, as it has been designed and constructed under Special Survey. I have respectfully to submit that it be approved as auxiliary to a classed main engine.

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

The amount of Entry Fee	£	:	When applied for,
Special	...	74. 232. 00	19.
Donkey Boiler Fee	...	£	When received,
Travelling Expenses (if any)	4	28. 67	June 22, 29
Total		£	260. 67

Committee's Minute TUE. 3 SEP 1929

Assigned *see minute on Malans*

Rpt 931 attached

K. J. Andersson
Acting Engineer Surveyor to Lloyd's Register of Shipping.



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