

# REPORT ON OIL ENGINE MACHINERY.

No 2936

f. 4b

Received at London Office 10 APR 1928

of writing Report 4<sup>th</sup> April 1928 When handed in at Local Office Stockholm in Port of Stockholm

in Survey held at Sickla, Skm. Distr. Date, First Survey 27 May 1927 Last Survey 23 March 1928.  
Book. Number of Visits 6.

on the Single } Screw vessels MOTORSHIP "JENNY" Tons { Gross 4706  
Twin }  
Triple }  
 at Newcastle By whom built Swan, Hunter & Wigham Yard No. 1252 When built 1928  
Richardson, Ltd.  
 ines made at Stockholm By whom made Aktieb. Atlas-Diesel Engine No. 80166 When made 1928  
 key Boilers made at By whom made Boiler No. When made  
 ke Horse Power 70 Owners Harry Borthen & Co., A.S. Port belonging to Oslo  
 n. Horse Power as per Rule 34 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

ENGINES, &c.—Type of Engines Diesel Oil Engine/type 2H25/2 or 4 stroke cycle Single or double acting  
 imum pressure in cylinders 35 Kg./cm.<sup>2</sup> No. of cylinders 2 Diameter of cylinders 250 mm. No. of cranks 2 Length of stroke 350 mm.  
 of bearings, adjacent to the Crank, measured from inner edge to inner edge 838 mm. Is there a bearing between each crank no  
 olutions per minute 300 Flywheel dia. 1200 mm. Weight 730 kg. Means of ignition Compression Kind of fuel used Crude oil  
 ank Shaft, dia. of journals as per Rule 162 mm. Crank pin dia. 164 mm. Crank Webs Mid. length breadth 430 mm. Thickness parallel to axis  
flywheel is fitted on the crank shaft Mid. length thickness 98 " shrunk Thickness around eye-hole  
 wheel Shafts, diameter as per Rule Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule  
as fitted as fitted as fitted

Shafts, diameter as per Rule Screw Shaft, diameter as per Rule Is the tube shaft fitted with a continuous liner  
as fitted as fitted  
 size 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  
 23-25: 28-2  
 7-3: 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  
 no liners are fitted, is the shaft lapped or protected between the liners Is an approved Oil Gland or other appliance fitted at the after  
 of the tube shaft Length of Bearing in Stern Bush next to and supporting propeller

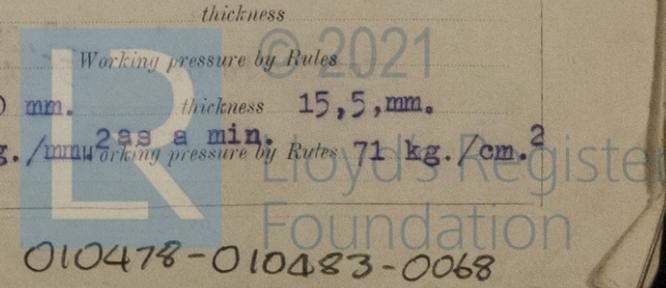
eller, dia. Pitch No. of blades Material whether Moveable Total Developed Surface sq. feet  
 od of reversing Engines Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication  
 umps Thickness of cylinder liners none fitted Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with  
 nducting material If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine  
 ng Water Pumps, No. 1 Is the sea suction provided with an efficient strainer which can be cleared within the vessel  
 Pumps fitted to the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work

ps connected to the Main Bilge Line { No. and Size  
 How driven  
 Lubricating Oil Pumps, including Spare Pump, No. and size  
 independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge  
 s, No. and size:—In Engine and Boiler Room  
 ilds, &c.  
 pendent Power Pump Direct Suctions to the Engine Room Bilges, No. and size  
 ll the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes. Are the Bilge Suctions in the Machinery Space  
 om easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

all Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks  
 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  
 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  
 at pipes pass through the bunkers How are they protected  
 at pipes pass through the deep tanks Have they been tested as per Rule

all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times  
 he 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  
 partment to another Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from  
 a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork  
 in Air Compressors, No. No. of stages Diameters Stroke Driven by  
 xiliary Air Compressors, No. No. of stages Diameters Stroke Driven by  
 all Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by  
 avenging Air Pumps, No. Diameter Stroke Driven by

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule yes  
 the internal surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces mudhole 120 mm.  
 there a drain arrangement fitted at the lowest part of each receiver yes  
 gh Pressure Air Receivers, No. none fitted /solid injection/  
 Cubic capacity of each Internal diameter thickness  
 mless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules  
 uring Air Receivers, No. 1 Total cubic capacity 72 litres Internal diameter 240 mm. thickness 15,5 mm.  
 mless, lap welded or riveted longitudinal joint lapwelded Material S.M. Steel Range of tensile strength 36 kg./mm<sup>2</sup> Working pressure by Rules 71 kg./cm.<sup>2</sup>



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS .....	17.3.28	35 Kg./cm. <sup>2</sup>	80 kg./cm. <sup>2</sup>	LLOYD'S TEST AI. 17.3.28 A	80 kg.
"    "    COVERS .....	/cover is in one piece with cylinder/				
"    "    JACKETS .....	17.3.28	-	4 Kg./cm. <sup>2</sup>		
"    "    PISTON WATER PASSAGES .....	/open pistons/				
MAIN COMPRESSORS—1st STAGE .....					
"    "    2nd .....	none fitted				
"    "    3rd .....					
AIR RECEIVERS—STARTING .....	16.3.28	50 kg./cm. <sup>2</sup>	100 kg./cm. <sup>2</sup>	N:o 5605 LLOYD'S TEST 100 Kg. WP. 50 Kg. AI.16.3.28 A	
"    "    INJECTION .....					
AIR PIPES .....					
FUEL PIPES .....	17.3.28	300 kg./cm. <sup>2</sup>	600 kg./cm. <sup>2</sup>		
FUEL PUMPS .....	17.3.28	300 "	600 "		
SILENCER .....					
"    "    WATER JACKET .....					
SEPARATE FUEL TANKS .....					

See Secretary's letter

PLANS. Are approved plans forwarded herewith for Shafting **E.11.5.25** Receivers **E.17.7.23** Separate Tanks  
 (If not, state date of approval)  
 Donkey Boilers General Pumping Arrangements Oil Fuel Burning Arrangements

SPARE GEAR as per list, approved on the 20th Sept. 1927, will be 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-- 27, 21 1927, 2, 16, 17 & 23 1928  
 5 11 3  
 During erection on board vessel--  
 Total No. of visits in shop 6

Dates of Examination of principal parts—Cylinders with Covers 16, 17 28 Pistons 17 28 Rods Connecting rods 27, 21 2  
 3 3 5 11  
 Crank shaft 21, 27, 2, 16 28 Flywheel shaft Thrust shaft Intermediate shafts Tube shaft  
 11 2 3  
 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 **S.M. Steel** Identification Mark **LLOYD'S N:o 5566 AI.2.2.28A** Flywheel shaft, Material Identification Mark  
 Thrust shaft, Material Identification Mark Intermediate shafts, Material Identification Mark  
 Tube shaft, Material Identification Mark Screw shaft, Material Identification Mark

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

Is this machinery duplicate of a previous case **yes** If so, state name of vessel **See Skm. report no. 2917.**

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

I am of opinion that this engine is of superior material and workmanship, and 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.

The amount of Entry Fee **Kr. 218,40** : When applied for,  
 Special ... £ : : 30.3. 1928  
 Donkey Boiler Fee ... £ : : When received,  
 Travelling Expenses (if any) **£ 38,00** : 19  
**Total Kronor 256,40**

Committee's Minute

Assigned

*A. Eriksson*  
 Engineer Surveyor to Lloyd's Register of Shipping.  
 Assisted by Mr. K. J. Andersson



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