

## REPORT ON OIL ENGINE MACHINERY

No. 2667.

16 MAR 1926

Date of writing Report 11 Mars 1926 When handed in at Local Office

Port of Stockholm

No. in Survey held at Slickla, Skm. Distr.  
Reg. Book.

Date, First Survey 12 Febr.

Last Survey 2 March 1925.

Number of Visits 3

on the Single  
Twin  
Triple } Screw vesselsTons Gross  
Net

Master \_\_\_\_\_ Built at \_\_\_\_\_ By whom built \_\_\_\_\_ Yard No. \_\_\_\_\_ When built \_\_\_\_\_  
 Engines made at Stockholm By whom made Aktiel. Atlas-Diesel Engine No. 40509 When made 1926  
 Donkey Boilers made at \_\_\_\_\_ By whom made \_\_\_\_\_ Boiler No. \_\_\_\_\_ When made \_\_\_\_\_  
 Brake Horse Power 32,5 Owners Messrs. Atlas-Diesel Co. Ltd Port belonging to London  
 Nom. Horse Power as per Rule 17 Is Refrigerating Machinery fitted for cargo purposes \_\_\_\_\_ Is Electric Light fitted \_\_\_\_\_

OIL ENGINES, &c.—Type of Engines Stationary Diesel Oil Engine (Type MT1) 2 or 4 stroke cycle Single or double acting  
 Maximum pressure in cylinders 35 kg/cm<sup>2</sup> No. of cylinders 1 No. of cranks 1 Diameter of cylinders 250 mm.  
 Length of stroke 370 mm. Revolutions per minute 300 Means of ignition Diesel Kind of fuel used Crude Oil  
 Is there a bearing between each crank \_\_\_\_\_ Span of bearings (Page 91, Section 2, par. 7 of Rules) 310 mm.  
 Distance between centres of main bearings 593 mm. Is a flywheel fitted yes Diameter of crank shaft journals as per Rule 139 mm.  
 as fitted 145 "  
 Diameter of crank pins 145 mm. Breadth of crank webs as per Rule 185 mm.  
 as fitted 210 " Thickness of ditto as per Rule 78 mm.  
 as fitted 82 "  
 Diameter of flywheel shaft as per Rule \_\_\_\_\_ Diameter of tunnel shaft as per Rule \_\_\_\_\_  
 as fitted \_\_\_\_\_ Diameter of thrust shaft as per Rule \_\_\_\_\_  
 as fitted \_\_\_\_\_  
 Diameter of screw shaft as per Rule \_\_\_\_\_ Is the screw shaft fitted with a continuous liner the whole length of the stern tube  
 as fitted \_\_\_\_\_  
 Is the after end of the liner made watertight in the propeller boss \_\_\_\_\_ If the liner is in more than one length are the joints burned \_\_\_\_\_  
 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 \_\_\_\_\_  
 If two liners are fitted, is the shaft lapped or protected between the liners \_\_\_\_\_ If without liners, is the shaft arranged to run in oil \_\_\_\_\_  
 Type of outer gland fitted to stern tube \_\_\_\_\_ Length of stern bush \_\_\_\_\_ Diameter of propeller \_\_\_\_\_  
 Pitch of propeller \_\_\_\_\_ No. of blades \_\_\_\_\_ state whether moveable \_\_\_\_\_ Total surface \_\_\_\_\_ square feet  
 Method of reversing ✓ Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Thickness of cylinder liners 25 mm.  
 Are the cylinders fitted with safety valves yes Means of lubrication pumps 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 \_\_\_\_\_  
 No. of cooling water pumps 1 Is the sea suction provided with an efficient strainer which can be cleared  
 within the vessel \_\_\_\_\_ No. of bilge pumps fitted to the main engines \_\_\_\_\_ Diameter of ditto \_\_\_\_\_ Stroke \_\_\_\_\_  
 Can one be overhauled while the other is at work \_\_\_\_\_ No. of auxiliary pumps connected to the main bilge lines \_\_\_\_\_ How driven \_\_\_\_\_  
 Sizes of pumps \_\_\_\_\_ No. and sizes of suctions connected to both main bilge pumps and auxiliary bilge pumps:—In engine room \_\_\_\_\_  
 and in holds, etc. \_\_\_\_\_ No. of ballast pumps \_\_\_\_\_ How driven \_\_\_\_\_ Sizes of pumps \_\_\_\_\_  
 Is the ballast pump fitted with a direct suction from the engine room bilges \_\_\_\_\_ State size \_\_\_\_\_ Is a separate auxiliary pump suction fitted in \_\_\_\_\_  
 Engine Room and size \_\_\_\_\_ Are all the bilge suction pipes fitted with roses \_\_\_\_\_ Are the roses in Engine Room always accessible \_\_\_\_\_  
 Are the sluices on Engine Room bulkheads always accessible \_\_\_\_\_ Are all connections with the sea direct on the skin of the ship \_\_\_\_\_  
 Are they valves or cocks \_\_\_\_\_ Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates \_\_\_\_\_  
 Are the discharge pipes above or below the deep water line \_\_\_\_\_ Are they each fitted with a discharge valve always accessible on the plating of the vessel \_\_\_\_\_  
 Are all pipes, cocks, valves and pumps in connection with the machinery accessible at all times \_\_\_\_\_ Are the bilge suction pipes, cocks and valves arranged so as to prevent any  
 communication between the sea and the bilges \_\_\_\_\_ Is the screw shaft tunnel watertight \_\_\_\_\_ Is it fitted with a watertight door \_\_\_\_\_  
 worked from \_\_\_\_\_ If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork \_\_\_\_\_  
 No. of main air compressors 1 No. of stages 2 Diameters 115/35 mm. Stroke 115 mm. Driven by engine  
 No. of auxiliary air compressors \_\_\_\_\_ No. of stages \_\_\_\_\_ Diameters \_\_\_\_\_ Stroke \_\_\_\_\_ Driven by \_\_\_\_\_  
 No. of small auxiliary air compressors \_\_\_\_\_ No. of stages \_\_\_\_\_ Diameters \_\_\_\_\_ Stroke \_\_\_\_\_ Driven by \_\_\_\_\_  
 No. of scavenging air pumps \_\_\_\_\_ Diameter \_\_\_\_\_ Stroke \_\_\_\_\_ Driven by \_\_\_\_\_  
 Diameter of auxiliary Diesel Engine crank shafts as per Rule \_\_\_\_\_ Are the air compressors and their coolers made so as to be easy of access \_\_\_\_\_  
 as fitted \_\_\_\_\_

AIR RECEIVERS:—No. of high pressure air receivers 1 Internal diameter 240 mm. Cubic capacity of each 25 litres  
 material S.M. Steel Seamless, lap welded or riveted longitudinal joint lapwelded Range of tensile strength 36 kg/mm<sup>2</sup> as a min.  
 thickness 15,5 mm. working pressure by Rules 72 kg/cm<sup>2</sup> No. of starting air receivers 1 Internal diameter 300 mm.  
 Total cubic capacity 96 litres Material S.M. Steel Seamless, lap welded or riveted longitudinal joint lapwelded  
 Range of tensile strength 36 kg/mm<sup>2</sup> as a min. thickness 18,5 mm. Working pressure by rules 72 kg/cm<sup>2</sup> 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 yes What means are provided for cleaning their  
 inner surfaces mudhole 120 mm. Is there a drain arrangement fitted at the lowest part of each receiver yes



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 .....	(The cylinder liner is more than $\frac{1}{5}$ of the cylinder diam.)				
" " COVERS .....	25.2.26.	—	4 kg/cm <sup>2</sup>	LLOYD'S TEST 4 kg. AT 25.2.26. A	
" " JACKETS.....	25.2.26.	—	ditto	ditto	
" " PISTON WATER PASSAGES.....	(open piston)				
MAIN COMPRESSORS—1st STAGE.....	25.2.26.	10 kg/cm <sup>2</sup>	20 kg/cm <sup>2</sup>	A	
" 2nd " .....	25.2.26.	70 —	140 —		
" 3rd " .....	—	—	—		
AIR RECEIVERS—STARTING .....	24.2.26.	70 kg/cm <sup>2</sup>	140 kg/cm <sup>2</sup>	No. 5365 LLOYD'S TEST 140 kg. WP 70 kg. AT 24.2.26. A	
" INJECTION .....	24.2.26.	—	—	No. 5366 LLOYD'S TEST 140 kg. WP 70 kg. AT 24.2.26. A	
AIR PIPES .....	25.2.26.	—	—		
FUEL PIPES .....	25.2.26.	—	—	A	
FUEL PUMPS .....	25.2.26.	—	—		
SILENCER .....	(none ordered)				
" WATER JACKET .....					
SEPARATE FUEL TANKS .....					

PLANS. Are approved plans forwarded herewith for shafting  
(If not, state date of approval)

Receivers E 17.7.23.

Separate Tanks.

SPARE GEAR as per list, approved on the 25<sup>th</sup> May 1925, 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 - - 12.19.24 & 25.2.26  
During erection on board vessel - - 2  
Total No. of visits in shop 5.

Dates of Examination of principal parts—Cylinders  $\frac{19.25}{2} 26$  Covers  $\frac{19.25}{2} 26$  Pistons  $\frac{25}{2} 26$  Rods Connecting rods  $\frac{12.25}{2} 26$ .

Crank shaft  $\frac{12.25}{2} 26$  Thrust shaft Tunnel shafts Screw shaft Propeller Stern tube Engine seatings

Engines holding down bolts Completion of pumping arrangements Engines tried under working conditions in shop 19.2.26.

Completion of fitting sea connections Stern tube LLOYD'S No. 5362 AT 25.2.26 A Screw shaft and propeller

Material of crank shaft J.M. Steel Identification Mark on Do. Material of thrust shaft Identification Mark on Do.

Material of tunnel shafts Identification Marks on Do. Material of screw shafts Identification Marks on Do.

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. 2666.

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 the main engine. The above engine has now been properly fitted and secured on board the M.V. Storsten, tried under working conditions and found satisfactory. H. J. Sutherland Glasgow 4/10/26.

The amount of Entry Fee ... £ : : When applied for,  
Special ... £ 218.40 : 11 March 1926  
Donkey Boiler Fee ... £ : : When received,  
Travelling Expenses (if any) £ 19.11 : 19  
Total £ 237.51

Committee's Minute

Assigned

See Gls. SE Rpt. 45810

A. Bakson

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



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Foundation