

# REPORT ON OIL ENGINE MACHINERY.

No. 89219.

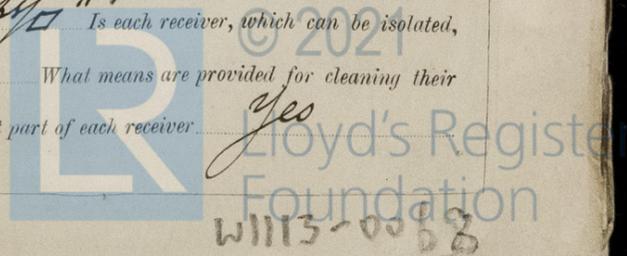
Received at London Office 18 AUG 1925

Date of writing Report 19... When handed in at Local Office 19... Port of London  
 No. in Survey held at Sancti Spiritus & Las Palmas Date, First Survey July 21<sup>st</sup> Last Survey July 26<sup>th</sup> 1925  
 Reg. Book. 15403 on the Single Screw vessels. BURE Number of Visits Six  
 Master E. Dahl Built at Lönsberg By whom built Ys. Nos. Insk. Verket Yard No. 3 When built 1918  
 Engines made at Stockholm By whom made Mkt. Atlas Diesel Engine No. - When made 1918  
 Donkey Boilers made at Stockholm By whom made Ys. Nos. Insk. Verket Boiler No. 3 When made 1918  
 Brake Horse Power 250 Owners Fred Olsen & Co. Port belonging to  
 Nom. Horse Power as per Rule 109 III Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

OIL ENGINES, &c.—Type of Engines Atlas Polar Diesel 2 or 4 stroke cycle 2 Single or double acting S.A.  
 Maximum pressure in cylinders 500 lbs/sq" No. of cylinders four No. of cranks four Diameter of cylinders 12.6 "12.5"  
 Length of stroke 18.5 "18.2" Revolutions per minute 194 Means of ignition Compression Kind of fuel used Diesel Oil  
 Is there a bearing between each crank Yes Span of bearings (Page 92, Section 2, par. 7 of Rules) 16 7/8 "  
 Distance between centres of main bearings 13 1/16 " Is a flywheel fitted Yes Diameter of crank shaft journals as per Rule 7.57 "  
 as fitted 7 7/8 " Diameter of crank shaft journals as fitted 7 7/8 "  
 Diameter of crank pins 7 7/8 " Breadth of crank webs as per Rule 10.07 " Thickness of ditto as per Rule 4.24 "  
 as fitted 10 5/8 " Thickness of ditto as fitted 4 1/4 "  
 Diameter of flywheel shaft as per Rule 7.8 " Diameter of tunnel shaft as per Rule 5 "5 27/32 " Diameter of thrust shaft as per Rule 7.8 "  
 as fitted 7 7/8 " Diameter of thrust shaft as fitted 7 7/8 "  
 Diameter of screw shaft as per Rule 6.56 " Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liner  
 as fitted 6.5 " If the liner is in more than one length are the joints burned ✓  
 Is the after end of the liner made watertight in the propeller boss No  
 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 Yes  
 Type of outer gland fitted to stern tube Rederval Length of stern bush 28 1/2 " Diameter of propeller 78 "  
 Pitch of propeller 4'-6" No. of blades Three state whether moveable No Total surface 8 # square feet  
 Method of reversing Can Shift Direct a governor or other arrangement fitted to prevent racing of the engine Yes Thickness of cylinder liners 1 1/2 "  
 Are the cylinders fitted with safety valves Yes Means of lubrication Forced at 30 lbs/sq" Are the exhaust pipes and silencers water cooled lagged with  
 non-conducting material Yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine  
Exhaust to Tunnel No. of cooling water pumps Two Is the sea suction provided with an efficient strainer which can be cleared  
 within the vessel Yes No. of bilge pumps fitted to the main engines Two Diameter of ditto 5 3/4 " Stroke 2 1/2 "  
 Can one be overhauled while the other is at work Yes No. of auxiliary pumps connected to the main bilge lines One How driven Steam  
 Sizes of pumps 4 9/16 x 4 x 4 " No. and sizes of suctions connected to both main bilge pumps and auxiliary bilge pumps:—In engine room 2 e 2 "  
 and in holds, etc. 3 e 2 " No. of ballast pumps One How driven Steam Sizes of pumps 3 9/16 x 3 9/16 x 2 1/16 "  
 Is the ballast pump fitted with a direct suction from the engine room bilges Yes State size 2 " Is a separate auxiliary pump suction fitted in  
 Engine Room and size yes, 3 " Are all the bilge suction pipes fitted with roses yes Are the roses in Engine Room always accessible yes  
 Are the sluices on Engine Room bulkheads always accessible None Are all connections with the sea direct on the skin of the ship yes  
 Are they valves or cocks Coocks Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates yes  
 Are the discharge pipes above or below the deep water line Both Are they each fitted with a discharge valve always accessible on the plating of the vessel yes  
 Are all pipes, cocks, valves and pumps in connection with the machinery accessible at all times yes Are the bilge suction pipes, cocks and valves arranged so as to prevent any  
 communication between the sea and the bilges yes Is the screw shaft tunnel watertight None 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 Two No. of stages 2 Diameters 9 3/8 " 2 3/4 " Stroke 14 1/8 " Driven by Main Engine  
 No. of auxiliary air compressors One No. of stages 2 Diameters 7 1/2 " 1 3/4 " Stroke 9 5/8 " Driven by Diesel Engine  
 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 3.8 Are the air compressors and their coolers made so as to be easy of access Yes  
 as fitted 3.75

AIR RECEIVERS:—No of high pressure air receivers One Internal diameter 13 3/4 " Cubic capacity of each 18,042  
 material Seamless Seamless, lap welded or riveted longitudinal joint Seamless Range of tensile strength ✓  
 thickness 3/4 " working pressure by Rules 1,344 lbs/sq" No. of starting air receivers One Internal diameter 33 1/2 "  
 Total cubic capacity 101,142 Material Seamless Seamless, lap welded or riveted longitudinal joint Welder  
 Range of tensile strength ✓ thickness 1/2 " Working pressure by rules 206 lbs/sq" 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 P. Non-st. used and. Water, manhole in end. Is there a drain arrangement fitted at the lowest part of each receiver Yes



IS A DONKEY BOILER FITTED? *Yes.* If so, is a report now forwarded? *Yes.*

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS .....					
"    "    COVERS .....					
"    "    JACKETS.....					
"    "    PISTON WATER PASSAGES.....					
MAIN COMPRESSORS—1st STAGE.....					
"    2nd " .....					
"    3rd " .....					
AIR RECEIVERS—STARTING .....					
"    INJECTION .....					
AIR PIPES .....					
FUEL PIPES .....					
FUEL PUMPS .....					
SILENCER .....					
"    WATER JACKET .....					
SEPARATE FUEL TANKS .....					

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

SPARE GEAR *3 pistons; 4 cyl. covers; 1 compressor cover; 40 piston rings; 1 set comp. piston springs; 1 main bearing; 3 crosshead bearings; 2 fuel admission valves; 6 HP & 2 LP compressor valves; 12 piston pins; 4 sets telescopic lubricating gear; 10 coupling bolts; 1 propeller; 1 lubricating oil pump; 1 fuel oil pump for tanks; 1 set of fuel oil pumps; 2 sets air pipes & valves for compressor; 1 set valve for circulating pump; 1 set valves for bilge pumps; 1 set cyl. lubrication covers; 4 cyl. safety valves; 1 set safety valves for Air Receivers; 4 crosshead pins; 1 cyl. cover for Aux. Diesel & 1 set fuel oil valves.*

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building	During progress of work in shops--					
	During erection on board vessel--					
	Total No. of visits					
Dates of Examination of principal parts—Cylinders		Covers	Pistons	Rods	Connecting rods	
Crank shaft	Thrust shaft	Tunnel shafts	Screw shaft	Propeller	Stern tube	Engine seatings
Engines holding down bolts		Completion of pumping arrangements		Engines tried under working conditions		
Completion of fitting sea connections		Stern tube		Screw shaft and propeller		
Material of crank shaft		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 \_\_\_\_\_ If so, state name of vessel \_\_\_\_\_

General Remarks (State quality of workmanship, opinions as to class, &c.) *This vessel has been placed on the shipway and all the machinery opened up and examined the main dimension being taken. So far as could be seen the material & workmanship is good. The Propeller, sea connections and all fastenings; Screw, Thrust, intermediate and crank shafts; Engine & Compressor cylinders and valves; Fuel and lubrication pumps; all working parts of the Aux. Compressor and all Aux. pumps opened up and examined. The Donkey Boiler examined externally, internally and under steam & the safety valves adjusted to 80 lbs. Air receivers examined internally & externally. All the machinery now examined is in good condition and eligible in my opinion to be classed with the record of L.M.C. 725; D.B.S. 725-80 lbs.; (SOG) 725.*

The amount of Entry Fee ... £	When applied for,
Special ... £	19.
Donkey Boiler Fee ... £	When received,
Travelling Expenses (if any) £	19.

*Arthur A. Palmer*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *TUES. 25 AUG 1925* *FRI. 9 OCT 1925* *FRI. 5 FEB 1926*  
 Assigned *L.M.C. 7.25* *O.G. CERTIFICATE WRITTEN.*  
*D.B.S. 7.25* *Oil Eng. CERTIFICATE WRITTEN.*

