

REPORT ON OIL ENGINE MACHINERY.

No.

Received at London Office

1 MAR 1926

Writing Report *25th Feb 1926* When handed in at Local Office *25th Feb 1926* Port of *BARCELONA*

Survey held at *TARRAGONA* Date, First Survey *7th MAY 1923* Last Survey *25th February 1926*

on the *Single* Screw vessel *C. 18.* Tons *36*

Built at *TARRAGONA* By whom built *Union Naval de Levante* Yard No. *C. 18* When built *1925*

Machinery made at *STOCK HOLM* By whom made *J. C. Bolinder, Co. Ltd* Engine No. *187* When made *1923*

Boilers made at *✓* By whom made *✓* Boiler No. *✓* When made *✓*

Horse Power *160.* Owners *CIA. ARRENDATARIA DE TOBACOS* Port belonging to *BARCELONA*

Horse Power as per Rule *46. ✓* Is Refrigerating Machinery fitted for cargo purposes *No. ✓* Is Electric Light fitted *No. ✓*

ENGINES, &c. Type of Engines *BOLINDER OIL ENGINE ✓* 2 or 4 stroke cycle *2* Single or double acting *SINGLE*

Working pressure in cylinders *17 1/2 / sq cm.* No. of cylinders *4 ✓* No. of cranks *4 ✓* Diameter of cylinders *300 mm ✓*

Length of stroke *310 mm ✓* Revolutions per minute *350 ✓* Means of ignition *HOT BULB ✓* Kind of fuel used *CRUDE OIL ✓*

Clearance between bearings *YES ✓* Span of bearings (Page 92, Section 2, par. 7 of Rules) *600 mm ✓*

Distance between centres of main bearings *600 mm ✓* Is a flywheel fitted *YES ✓* Diameter of crank shaft journals *as per Rule 121 mm ✓*
as fitted 128 mm ✓

Diameter of crank pins *128 mm ✓* Breadth of crank webs *as per Rule 161 mm ✓*
as fitted 170 mm ✓ Thickness of ditto *as per Rule 68 mm ✓*
as fitted 71 mm ✓

Diameter of flywheel shaft *as per Rule FLYWHEEL FITTED AT* Diameter of tunnel shaft *as per Rule* Diameter of thrust shaft *as per Rule 116 mm ✓*
as fitted FOREEND CRANKSHAFT *as fitted* *as fitted 118 mm ✓*

Diameter of screw shaft *as per Rule 100 mm ✓* Is the screw shaft fitted with a continuous liner the whole length of the stern tube *No. 3 SEPARATE LINERS*
as fitted 100 mm ✓

After end of the liner made watertight in the propeller boss *YES ✓* If the liner is in more than one length are the joints burned *✓*

Does the liner 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 *✓*

Are the liners fitted, is the shaft lapped or protected between the liners *YES ✓* If without liners, is the shaft arranged to run in oil *✓*

Is the outer gland fitted to stern tube *LIQNUM VITAE ✓* Length of stern bush *400 mm ✓* Diameter of propeller *1.215 m = 48" ✓*

Diameter of propeller *1.500 m ✓* No. of blades *3 ✓* state whether moveable *No. ✓* Total surface *370 square feet ✓*

Means of reversing *TIMING ✓* Is a governor or other arrangement fitted to prevent racing of the engine when declutched *YES ✓* Thickness of cylinder liners *✓*

Are the cylinders fitted with safety valves *No ✓* Means of lubrication *PUMPS ✓* Are the exhaust pipes and silencers water cooled or lagged with *EXHAUST*

Conducting material *No ✓* If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine *EXHAUST*

Is there a funnel *✓* No. of cooling water pumps *2 ✓* Is the sea suction provided with an efficient strainer which can be cleared *✓*

Can the vessel be overhauled while the other is at work *✓* No. of bilge pumps fitted to the main engines *1 ✓* Diameter of ditto *100 mm ✓* Stroke *50 mm ✓*

No. of pumps *3 ✓* No. and sizes of suctions connected to both main bilge pumps and auxiliary bilge pumps:—In engine room *5 ✓* How driven *HAND ✓*

Are the pumps *✓* No. of ballast pumps *—* How driven *—* Sizes of pumps *—*

Is a ballast pump fitted with a direct suction from the engine room bilges *—* State size *—* Is a separate auxiliary pump suction fitted in *—*

Is the Engine Room and size *3" HAND PUMP ✓* 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 *—* Are all connections with the sea direct on the skin of the ship *YES ✓*

Are the valves or cocks *VALVES ✓* 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 *ABOVE ✓* Are they each fitted with a discharge valve always accessible on the plating of the vessel *YES ✓*

Are the 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 *—*

Is there any communication between the sea and the bilges *YES ✓* Is the screw shaft tunnel watertight *—* Is it fitted with a watertight door *—*

Is there any leakage 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 *NONE FITTED ✓* No. of stages *—* Diameters *—* Stroke *—* Driven by *—*

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 *—*

Are the air compressors and their coolers made so as to be easy of access *—*

RECEIVERS:—No. of high pressure air receivers *—* Internal diameter *—* Cubic capacity of each *—*

Material *—* Seamless, lap welded or riveted longitudinal joint *—* Range of tensile strength *—*

Working pressure by Rules *—* No. of starting air receivers *1.* Internal diameter *434 mm ✓*

Cubic capacity *280 litres* Material *S.M. STEEL ✓* Seamless, lap welded or riveted longitudinal joint *LAPWELDED ✓*

Working pressure by rules *257 lbs* Is each receiver, which can be isolated, *—*

Thickness *8 mm ✓* Working pressure by rules *257 lbs* What means are provided for cleaning their *—*

Can the internal surfaces of the receivers be examined *YES ✓* Is there a drain arrangement fitted at the lowest part of each receiver *Yes ✓*

Are the surfaces *Man hole done ✓*

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IS A DONKEY BOILER FITTED? No

If so, is a report now forwarded?

HYDRAULIC TESTS:--

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS					
" " COVERS					
" " JACKETS.....					
" PISTON WATER PASSAGES.....					
MAIN COMPRESSORS—1st STAGE.....					
" 2nd "	SEE STOCKHOLM REPORT NO. 2294				
" 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 STOCKHOLM Rpt Receivers Separate Tanks
 (If not, state date of approval)

SPARE GEAR

valves, valve seats and springs, piston rings, bottom end and main bearings, bolts & nuts, Coupling bolts, fuel pump & one set of valves for circulating & bilge pumps

The foregoing is a correct description,
 UNION NAVAL ASTILLEROS DE TARRAGONA

Arriand

For installing the machinery
 Manufacturer.

Dates of Survey while building	During progress of work in shops --	During erection on board vessel --	Total No. of visits	STOCKHOLM Rpt	Cylinders	Covers	Pistons	Rods	Connecting rods		
		23/7/25, 13.26/8/25, 4.22/9/25, 2.14.16.19/10/25, 13/1/26, 25/1/26	11	STOCKHOLM Rpt							
Dates of Examination of principal parts	Crank shaft	Thrust shaft	Tunnel shafts	Screw shaft	5-5-25	Propeller	16-10-25	Stern tube	4-9/25	Engine seatings	26/8
Engines holding down bolts	22/9/25	Completion of pumping arrangements	16/10/25	Engines tried under working conditions	19/10/25						
Completion of fitting sea connections	2/10/25	Stern tube	2/10/25	Screw shaft and propeller	16/10/25						
Material of crank shaft	S. M. Steel	Identification Mark on Do. A. 2. 2. 23 A	Material of thrust shaft	S. M. Steel	Identification Mark on Do. A. 2. 2. 23 A						
Material of tunnel shafts	-	Identification Marks on Do. -	Material of screw shafts	S. M. Steel	Identification Marks on Do. -						

Is the flash point of the oil to be used over 150° F. 14 ✓

Is this machinery duplicate of a previous case Yes ✓ If so, state name of vessel C. 17 ✓

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

The workmanship being good and the machinery being well constructed and installed in accordance with the approved plans and under special survey, is, in my opinion, eligible for classification with notation of LMC 2-26.

It is submitted that this vessel is eligible for THE RECORD. + LMC 2. 26.

Oil Engines 25C. SA.
 4 Cy ^{11 13}/₁₆ - 12 ³/₁₆ 46 NHP.

The amount of Entry Fee ...	Special ...	Donkey Boiler Fee ...	Travelling Expenses (if any) ...	When applied for, 30 th Dec 1925	When received, 19. 4. 1926
£	£ 103/0/0	£	£		

Committee's Minute

TUES. 2 MAR 1926

Assigned

+ LMC 2:26
 Oil Engines

C. H. Fowling
 Engineer Surveyor to Lloyd's Register of Shipping



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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.)

CERTIFICATE WRITTEN