

REPORT ON OIL ENGINE MACHINERY.

No.

1MAH 1926

Date of writing Report 23 Feb. 1926 When handed in at Local Office 25 Feb. 1926 Port of BARCELONA

Received at London Office

No. in Survey held at TARRAGONA Date, First Survey 7 MAY. 1923 Last Survey 25 Feb. 1926

on the Single Screw vessels C. 19 Tons ^{Gross} 36 _{Net} 0

Master Union havel Built at TARRAGONA By whom built de Levante Yard No. C. 19 When built 1925

Engines made at STOCKHOLM By whom made J.C.F. Bolinder Co Ltd Engine No. 15192/95 When made 1923

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

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

Indicated Horse Power as per Rule 46 Is Refrigerating Machinery fitted for cargo purposes NO Is Electric Light fitted NO

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

Maximum pressure in cylinders 17 kg/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

Is there a bearing between each crank 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 Thickness of ditto ^{as per Rule} 68 mm _{as fitted} 71.5 mm

Diameter of flywheel shaft ^{as per Rule} 100 mm _{as fitted} 100 mm Diameter of tunnel shaft ^{as per Rule} 116 mm _{as fitted} 118 mm

Diameter of screw shaft ^{as per Rule} 100 mm _{as fitted} 100 mm Is the screw shaft fitted with a continuous liner the whole length of the stern tube NO 3 SEPARATE LINERS

Is the 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 do 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 ✓

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

Type of outer gland fitted to stern tube none Length of stern bush 400 mm Diameter of propeller 1.215 m. = 48"

Pitch of propeller 1.500 m. No. of blades 3 state whether moveable NO Total surface 370 square feet

Method 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

Non-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 TO FUNNEL

Are there bilge pumps fitted to the main engines YES No. of bilge pumps fitted to the main engines 1 Diameter of ditto 100 mm Stroke 50 mm

Can one be overhauled while the other is at work ✓ No. of auxiliary pumps connected to the main bilge lines 5 How driven HAND

Sizes of pumps 3" No. and sizes of suction connected to both main bilge pumps and auxiliary bilge pumps:—In engine room —

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

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 they 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 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 ✓ Is it fitted with a watertight door ✓

Is the woodwork 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 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 —

Diameter of auxiliary Diesel Engine crank shafts ^{as per Rule} — _{as fitted} — Are the air compressors and their coolers made so as to be easy of access —

AIR 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 17"

Thickness — working pressure by Rules — No. of starting air receivers 1 Internal diameter 434 mm

Total cubic capacity 280 litres Material S.M. STEEL Seamless, lap welded or riveted longitudinal joint LAPWELDED

Range of tensile strength min. 23 kg/sq cm thickness 8 mm Working pressure by rules 257 lb Is each receiver, which can be isolated, —

Are they fitted with a safety valve as per Rule — Can the internal surfaces of the receivers be examined Yes What means are provided for cleaning their —

Internal surfaces manhole done 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					
" " COVERS					
" " JACKETS.....					
" PISTON WATER PASSAGES.....					
MAIN COMPRESSORS—1st STAGE.....					
" 2nd "	SEE STOCKHOLM REPORT NO 2306				
" 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 & springs, piston rings, bottom end and main bearings, bolts & nuts, Coupling bolts, fuel pump & one set of valves for circulating & bilge pump.

The foregoing is a correct description,
 ASTILLEROS DE TARRAGONA

Amisand

For installation of machinery.
 Manufacturer.

Dates of Survey while building { During progress of work in shops -- } Stockholm Rpt
 { During erection on board vessel -- } 4/9/25, 22/9/25, 2/10/25, 14/10/25, 26/10/25, 16/11/25
 Total No. of visits 6.

Dates of Examination of principal parts—Cylinders _____ Covers Lloyd's 213 J.L. Pistons _____ Rods _____ Connecting rods _____
 Crank shaft _____ Thrust shaft _____ Tunnel shafts _____ Screw shaft 24: 4: 25 Propeller 26/10/25 Stern tube 2/10/25 Engine seatings 4/umps
 Engines holding down bolts 22/9/25 Completion of pumping arrangements 16/11/25 Engines tried under working conditions 20/11/25
 Completion of fitting sea connections 26/10/25 Stern tube 14/10/25 Screw shaft and propeller 26/10/25
 Material of crank shaft 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 S. & Steel Identification Marks on Do. 24-

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 C. 17 & 18.

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 L.M.C. 2-26

It is submitted that this vessel is eligible for THE RECORD. + LMC 2-26.
 Oil Engines 25C.SA.
 4 Cy $11\frac{13}{16}$ - $12\frac{3}{16}$. 46 HP.

The amount of Entry Fee ... \$ 103/00 : When applied for, _____
 Special ... \$ _____ : _____
 Donkey Boiler Fee ... \$ _____ : _____
 Travelling Expenses (if any) \$ _____ : _____

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

Committee's Minute TUES. 2 MAR 1926
 Assigned + L.M.C. 2-26 Oil Engines



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