

REPORT ON OIL ENGINE MACHINERY

No. 8004

26 SEP 1931

Date of writing Report 9th Sep. 1931 When handed in at Local Office 21st Sep. 1931 Port of Bilbao
No. in Survey held at BILBAO Date, First Survey 29th Nov. 30. Last Survey 5th Sep. 1931
Reg. Book. Number of Visits 35

16593 on the ^{Single} Twin ^{Triple} Screw vessel "CABO SAN AGUSTIN" Tons { Gross 12588
Net 7251.

Built at BILBAO By whom built SOC. ESPAÑOLA DE CONST. NAVAL Yard No. 38 When built 1931.
Engines made at AUGSBURG By whom made MASCH. FABRIK AUGSBURG-NURMBERG Engine No. 330520 When made 1931.
Donkey Boiler made at BILBAO By whom made SOC. ESPAÑOLA DE CONST. NAVAL Boiler No. 118 When made 1931.
Brake Horse Power 2 x 4600. Owners MESSRS YBARRA Y CIA. Port belonging to SEVILLE
Nom. Horse Power as per Rule 2760 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted YES.
Trade for which vessel is intended PASSENGER AND GENERAL CARGO. 35 7/16

IL ENGINES, &c.—Type of Engines M.A.N. DIESEL [SOLID INJECTION] 2 or 4 stroke cycle 2. Single or double acting DOUBLE.
Maximum pressure in cylinders 45 ATM. Diameter of cylinders 23 7/8 x 600 M.M. Length of stroke 900 M.M. No. of cylinders 2 x 7. No. of cranks 2 x 7.
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 885 M.M. Is there a bearing between each crank YES.
Revolutions per minute 133. Flywheel dia. 2100 M.M. Weight 3120 KGS. Means of ignition DIESEL. Kind of fuel used HEAVY OIL.

Crank Shaft, dia. of journals as per Rule 420 M.M. Crank pin dia. 420 M.M. Crank Webs Mid. length breadth 560 M.M. Thickness parallel to axis ✓
as fitted 420 M.M. Mid. length thickness 235 M.M. Thickness around eyehole ✓

Flywheel Shaft, diameter as per Rule 420 M.M. Intermediate Shafts, diameter as per Rule 345 M.M. Thrust Shaft, diameter at collars as per Rule 400 M.M. ✓
as fitted 420 M.M. as fitted 345 M.M. as fitted 400 M.M.

Tube Shaft, diameter as per Rule 400 M.M. Is the screw shaft fitted with a continuous liner No.
as fitted 400 M.M.

Bronze Liners, thickness in way of bushes as per Rule 425 M.M. Thickness between bushes as per rule 425 M.M. Is the after end of the liner made watertight in the
as fitted 425 M.M. as fitted 425 M.M.

propeller boss ✓ If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner ✓

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. ✓ Is an approved Oil Gland or other appliance fitted at the after

end of the tube shaft. YES. CEDERVAL'S "SALVO" Length of Bearing in Stern Bush next to and supporting propeller 1630 M.M.

Propeller, dia. 4650 M.M. Pitch 3960 M.M. No. of blades 4. Material M.A.N. BRONZE whether Moveable YES. Total Developed Surface 8810 M. sq. feet

Method of reversing Engines DIRECT. Is a governor or other arrangement fitted to prevent racing of the engine when declutched YES. Means of lubrication

FORCED. Thickness of cylinder liners 425 M.M. Are the cylinders fitted with safety valves YES. Are the exhaust pipes and silencers water cooled or lagged with

an conducting material LAGGED. If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine ✓

cooling Water Pumps, No. 3 x 55 M³/HR. FRESH WATER. Is the sea suction provided with an efficient strainer which can be cleared within the vessel YES.

Bilge Pumps worked from the Main Engines, No. 1. Diameter 110 M.M. Stroke 110 M.M. Can one be overhauled while the other is at work ✓

Pumps connected to the Main Bilge Line { No. and Size BILGE PMP 110 M³/HR. EMERGENCY PMP 110 M³/HR. BALLAST PMP 150 M³/HR.
How driven BY ELECTRIC MOTOR & GEARS [DUPLIX DOUBLE ACTING].

Ballast Pumps, No. and size ONE 150 M³/HR. Lubricating Oil Pumps, including Spare Pump, No. and size 3 GEAR PUMPS 43 M³/HR.

Are two independent means arranged for circulating water through the Oil Cooler YES. Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

pumps, No. and size:—In Machinery Spaces 6 x 76 M.M. ✓

In Holds, &c. FOREPK. 1 x 76 M.M. Nos. 1, 2, & 3 HOLDS 2 x 76 M.M. EACH. NOS. 4 & 5 HOLDS 3 x 76 M.M. EACH. TUNNEL WELL 1 x 89 M.M.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size BILGE PMP 1 x 140 M.M. EMERGENCY PMP 1 x 140 M.M. BALLAST PMP 1 x 200 M.M.

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes YES. Are the Bilge Suctions in the Machinery Spaces

and from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges YES, ALSO TUNNEL WELL.

Are all Sea Connections fitted direct on the skin of the ship ON CASTIRON EXTENSIONS. Are they fitted with Valves or Cocks VALYES.

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates YES. Are the Overboard Discharges 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 Blow Off Cocks fitted with a spigot and brass covering plate YES.

What pipes pass through the bunkers ✓ How are they protected ✓

What pipes pass through the deep tanks FOR? BILGE & BALLAST LINES. Have they been tested as per Rule YES.

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times YES.

Is the 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

compartment to another YES. Is the Shaft Tunnel watertight YES. Is it fitted with a watertight door YES. worked from UPPER DK.

On a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork ✓

Main Air Compressors, No. 1. No. of stages 3. Diameters 350/295/100 M.M. Stroke 220 M.M. Driven by AUX. ENGINES.

Auxiliary Air Compressors, No. 2 x 315 M³/HR. No. of stages 3. Diameters 350/295/100 M.M. Stroke 220 M.M. Driven by AUX. ENGINES.

Small Auxiliary Air Compressors, No. 1 x 10 M³/HR. No. of stages 1. Diameters 100 M.M. Stroke 100 M.M. Driven by EMER. ENGINE.

Exhausting Air Pumps, No. 2 TANDEM. Diameter 1380 M.M. Stroke 820 M.M. Driven by MAIN ENGINE.

Auxiliary Engines crank shafts, diameter as per Rule 170 M.M. as fitted 170 M.M.

RECEIVERS:—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 MANHOLES [MAIN] REMOVABLE TOPS [AUX].

Is there a drain arrangement fitted at the lowest part of each receiver YES.

High Pressure Air Receivers, No. 1. Cubic capacity of each 100 LITRES. Internal diameter 100 M.M. thickness 17.5 M.M.

Low Pressure Air Receivers, No. 1. Material 2 x 15 M³. Range of tensile strength 400 M.M. Working pressure by Rules 40 M.M.

Working Air Receivers, No. 1. Material 2 x 15 M³. Range of tensile strength 400 M.M. Working pressure by Rules 40 M.M.

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IS A DONKEY BOILER FITTED? **YES** [FOR DOMESTIC PURPOSES ONLY] If so, is a report now forwarded? **YES.**
PLANS. Are approved plans forwarded herewith for Shafting **14.5.30** [3 PLANS] Receivers **✓** Separate Tanks **5.8.30. 20.7.31.**
Donkey Boilers **4.3.31. 17.4.31.** General Pumping Arrangements **28.8.30.** Oil Fuel Burning Arrangements **20.7.31.**
SPARE GEAR **IN EXCESS OF RULE REQUIREMENTS.**

INTER SHAFTING MARKED :-

	LLOYDS	LLOYDS	LLOYDS	LLOYDS	LLOYDS	LLOYDS
	N 920	N 906	N 904	N 907	N 909	N 926
PORT	13.2.31.	14.4.31	14.4.31	14.4.31	11.3.31	13.2.31
	G.D.	G.D.	G.D.	G.D.	G.D.	G.D.
	LLOYDS	LLOYDS	LLOYDS	LLOYDS	LLOYDS	LLOYDS
	N 910	N 906	N 906	N 914	N 919	N 903
STAR.	11.3.31	6.5.31	14.4.31	27.5.31	6.5.31	6.5.31
	G.D.	J.C.K.	G.D.	G.D.	J.C.K.	J.C.K.

The foregoing is a correct description
R. A. Tuller
Manufacturer.
Info del Departamento de Maquinaria

Dates of Survey while building
During progress of work in shops- 1930.
During erection on board vessel- Nov. 29, Dec. 4, 5, 6, 10, 12, 20, 21, 23, 30, Feb. 6, 12, 14, 18, 19, 23, 28, MAR. 3, 5, 11, 12, 13, 23, 23, 25, 30.
Total No. of visits 83. APR. 11, 22, 23, 24, 27, 28, 29, MAY 4, 7, 8, 11, 12, 15, 22, 23, 25, 27, 30, JUNE 8, 9, 10, 13, 16, 17, 19, 22, 23, 24, 26.
JULY 1, 6, 11, 13, 15, 23, 24, 28, 29, 30, AUG. 1, 6, 7, 8, 10, 11, 12, 17, 18, 19, 20, 21, 24, 25, 26, 27, SEP. 3, 5.
Dates of Examination of principal parts—Cylinders ✓ Covers ✓ Pistons ✓ Rods ✓ Connecting rods ✓
Crank shaft ✓ Flywheel shaft ✓ Thrust shaft 8.5.31. Intermediate shafts 9.6.31, 16.6.31. Tube shaft ✓
Screw shaft 20.4.31, 24.4.31. Propeller 25.4.31, 24.4.31. Stern tube 5.5.31, 9.4.31. Engine seatings 25.5.31. Engines holding down bolts 1.7.31.
Completion of fitting sea connections 23.4.31. Completion of pumping arrangements 26.5.31. Engines tried under working conditions ✓
Crank shaft, Material Ingot Steel. Identification Mark P. N. 927 S. N. 969 Flywheel shaft, Material Ingot Steel. Identification Mark P. N. 927 S. N. 969
Thrust shaft, Material Ingot Steel. Identification Mark 14.4.31. 6.5.31 Intermediate shafts, Material Ingot Steel. Identification Marks P. N. 927 S. N. 969
Tube shaft, Material Ingot Steel. Identification Mark 14.4.31. 6.5.31 Screw shaft, Material Ingot Steel. Identification Mark 12.2.31 11.3.31
Is the flash point of the oil to be used over 150° F. Yes.

Is this machinery duplicate of a previous case No. If so, state name of vessel
General Remarks (State quality of workmanship, opinions as to class, etc.) The machinery as stated in the Bremen Report No. 1342, has now been satisfactorily fitted on board this vessel, in accordance with the approved plans, and the Rules and Regulation of the Society. Workmanship and material were found to be good. The machinery has been tested under full working conditions and found satisfactory, twelve consecutive starts obtained of each main engine without replenishment of the air receivers. The machinery of this vessel is in my opinion eligible to be classed, and to have record of F.M.C. 9.31. in the Register Book.

The amount of Entry Fee 1/5. £ 1 : 4. :
Special £ 50 : 14. :
Donkey Boiler Fee £ 6 : 6. :
Travelling Expenses (if any) £ 12.15. :
When applied for, 19
When received, 1932

Committee's Minute

Assigned

CERTIFICATE WRITTEN.

Oil Eng.

George R. Chappel.
Engineer Surveyor to Lloyd's Register of Shipping.