

REPORT ON OIL ENGINE MACHINERY.

No. 7758

19 JUL 1930

Date of writing Report 12th July 1930 When handed in at Local Office 19 Port of Bilbao
No. in Survey held at Bilbao Date, First Survey March 20th 1930 Last Survey 4th July 1930
Reg. Book. Number of Visits 26

on the ^{Single} ~~Twin~~ ^{Triple} ~~Quadruple~~ Screw vessel "ARTZA MENDI"
Tons Gross 2954.69 Net 1527.06
Built at Bilbao By whom built Cia. Ensaldadura de Constr. Yard No. 91 When built 1930
Engines made at Bopendegun By whom made Burmeister & Wain Engine No. 1724 When made 1930
Donkey Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓
Brake Horse Power 1200 Owners Cia. Marina Sota y Aznar Port belonging to Bilbao
Nom. Horse Power as per Rule 272 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
Trade for which vessel is intended Ocean going, general cargo

L ENGINES, &c.—Type of Engines Diesel oil engine, airless injection 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 39 kg/cm² Diameter of cylinders 550 mm Length of stroke 1000 mm No. of cylinders 6 No. of cranks 6
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 730 mm Is there a bearing between each crank Yes
Revolutions per minute 125 Flywheel dia. 1362 mm Weight 839 kg Means of ignition Diesel Kind of fuel used Diesel oil
Crank Shaft, dia. of journals as per Rule 339.98 mm as fitted 345 mm Crank pin dia. 345 mm Crank Webs Mid. length breadth 696 mm Mid. length thickness 195 mm Thickness parallel to axis 215 mm Thickness around eye-hole 170 mm
Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule 9.61 mm as fitted 9 3/4 mm Thrust Shaft, diameter at collars as per Rule 10.09 mm as fitted 340 mm
Screw Shaft, diameter as per Rule 10.69 mm as fitted 10 7/8 mm Is the screw shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule 0.623 mm as fitted 3/16" & 13/16" Thickness between bushes as per rule 0.468 mm as fitted 1/2" 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 junctions made by fusion through the whole thickness of the liner One length

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 Yes

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

Yes If so, state type Lignum vitae Length of Bearing in Stern Bush next to and supporting propeller 4'-6"

Propeller, dia. 11'-6" Pitch 9'-0" No. of blades 4 Material Cast iron whether Moveable No Total Developed Surface 41.5 sq. feet

Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when decoupled Yes Means of lubrication

Lubricated Thickness of cylinder liners 38 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or 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 Funnel

Boiling Water Pumps, No. 2 Centrifugal, 60 ltr each 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. One Diameter 150 mm Stroke 175 mm Can one be overhauled while the other is at work Yes

Pumps connected to the Main Bilge Line No. and Size One - 150 x 175 mm; One Bilge - 70 ltr; One Ballast - 250 ltr How driven Main engine; Duplex plunger type driven by electric motor & gear

Ballast Pumps, No. and size One Duplex - 250 ltr Lubricating Oil Pumps, including Spare Pump, No. and size Two - 25 ltr each

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 65 mm dia suction, Port, Centre & Starboard, at after end. In Pump Room ✓

Holds, &c. N1-2@65 mm; N2-2@70 mm; N3-2@65 mm; N4-2@65 mm; Tunnel well 58 mm dia. ✓

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 - Ballast - 100 mm dia.; 1 Bilge - 65 mm dia. ✓

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

Are all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Yes

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 ✓

That pipes pass through the bunks How are they protected

That pipes pass through the deep tanks Have they been tested as per Rule

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 platform

If 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. None No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓

Auxiliary Air Compressors, No. Three No. of stages 2 Diameters ✓ Stroke ✓ Driven by Airline Diesel Engine

Small Auxiliary Air Compressors, No. One No. of stages 2 Diameters ✓ Stroke ✓ Driven by Hand

Scavenging Air Pumps, No. ✓ Diameter ✓ Stroke ✓ Driven by

Auxiliary Engines crank shafts, diameter as per Rule 161.8 mm as fitted 162 mm

R 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 and cleaned Yes Is a drain fitted at the lowest part of each receiver Yes

High Pressure Air Receivers, No. One Cubic capacity of each 250 ltr Internal diameter ✓ thickness ✓

Seamless, lap welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength ✓ Working pressure by Rules Actual

Starting Air Receivers, No. One Total cubic capacity 390 cu. ft. Internal diameter 6'-0" thickness ✓ Working pressure by Rules Actual

Seamless, lap welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength ✓ Working pressure by Rules Actual

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

Is the donkey boiler intended to be used for domestic purposes only?

PLANS. Are approved plans forwarded herewith for Shafting 6/3/29 - 5/4/29 Receivers 5/6/29 Separate Tanks 5/6/29
(If not, state date of approval)
Donkey Boilers 16/5/28 General Pumping Arrangements 16/5/28 Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied?

State the principal additional spare gear supplied

As per list attached to Copenhagen Report No. 8170.

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 26
1930 :- March 20; Apr. 2, 7, 9, 15, 17, 30; May 7, 9, 13, 17, 20, 26; June 3, 4, 6, 10, 14, 16, 20, 24, 26, 28, July 2, 4.

Dates of Examination of principal parts—Cylinders 17/5/30 Covers 17/5/30 Pistons 17/5/30 Rods 17/5/30 Connecting rods 13/5/30

Crank shaft 13/5/30 Flywheel shaft 13/5/30 Thrust shaft 13/5/30 Intermediate shafts 3/6/30 Tube shaft 3/6/30

Screw shaft 9/4/30 Propeller 30/6/30 Stern tube 9/4/30 Engine seatings 30/4/30 Engines holding down bolts 3/6/30

Completion of fitting sea connections 15/4/30 Completion of pumping arrangements 26/6/30 Engines tried under working conditions 28/6/30

Crank shaft, Material S.M. Steel Identification Mark 110-125 Flywheel shaft, Material S.M. Steel Identification Mark 110-125, 27, 28, 29 - 31/12/29

Thrust shaft, Material S.M. Steel Identification Mark 110-125 Intermediate shafts, Material S.M. Steel Identification Marks 110-125, 13/1/30

Tube shaft, Material S.M. Steel Identification Mark 110-125 Screw shaft, Material S.M. Steel Identification Mark 110-125, 19-12-29

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

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with Yes

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No If so, have the requirements of the Rules been complied with

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with

Is this machinery duplicate of a previous case Yes If so, state name of vessel "ANTUNE MENDI", "AYA MENDI", "AXPE MENDI", "ARNABAL MENDI", "ARAYA MENDI"

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

The Machinery of this vessel (see Copenhagen Report No. 8170) has been satisfactorily fitted on board, to Rule requirements and as per approved plan. The Machinery has been tested under full working conditions with satisfactory results and is eligible in my opinion to be classed, into the record of LMC 7.30 and notation of "Oil Engine", etc. in the Register Book.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 7.30 C-L
Oil Engines 45C.S.A. 6Cy. 21⁵/₈ - 39³/₈. N.H.P. 271

The amount of Entry Fee .. £ Pk. 205-
Special Installation of Machinery .. £ Pk. 1025-
Donkey Boiler Fee .. £
Travelling Expenses (if any) £ Pk. 28-
When applied for, 7/4/1930
When received, 9/4/1930

Committee's Minute

Assigned

CERTIFICATE WRITTEN.

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register Foundation