

Rpt. 4b

## REPORT ON OIL ENGINE MACHINERY.

No. 1422

Received at London Office

23 MAY 1934

Date of writing Report

May 13<sup>th</sup> 1934

When handed in at Local Office

19<sup>th</sup> May 1934

Port of

Cádiz

No. in Survey held at

San Severiano, Cádiz

Date, First Survey

April 15<sup>th</sup> 1932

Last Survey

May 12<sup>th</sup> 1934

Reg. Book.

Number of Visits

132

2904

Single  
Twin  
Triple  
Quadruple

Screw vessel

Motor Vessel "Campero"

Tons { Gross 6300  
Net

Built at

Cádiz

By whom built

Echevarrieta y Larinaga

Yard No. 24

When built 1938-4

Lines made at

Seslao Bilbao

By whom made

S. E. de C. V.

Engine No. 5.52.60334

When made 1933

Key Boilers made at

Bilbao

By whom made

Cia Euskalduna

Boiler No. 125

When made 1932

Horse Power

2 x 1500

Owners

C. A. M. P. S. A

Port belonging to

Malaga

Horse Power as per Rule

446

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

Use for which vessel is intended

Carrying oils in bulk see Campero

## ENGINES, &amp;c.

Type of Engines

Constructora Naval Sulzer

2 or 4 stroke cycle

2

Single or double acting

Single

Minimum pressure in cylinders

600 lbs

Diameter of cylinders

600 mm

Length of stroke

1040 mm

No. of cylinders

2 x 4

No. of cranks

2 x 4

of bearings, adjacent to the Crank, measured from inner edge to inner edge

440 mm

Is there a bearing between each crank

Yes

Revolutions per minute

Flywheel dia.

2100 mm

Weight

4800 lbs

Means of ignition

Air Inj.

Kind of fuel used

Gas oil

Crank Shaft, dia. of journals

as per Rule

390 mm

Crank pin dia.

390 mm

Crank Webs

Mid. length breadth

620 mm

shrunk

Thickness parallel to axis

245 mm

Flywheel Shaft, diameter

as per Rule

400 mm

Intermediate Shafts, diameter

as per Rule

365 mm

Thrust Shaft, diameter at collars

as per Rule

400 mm

Screw Shaft, diameter

as per Rule

354 mm

Screw Shaft, diameter

as per Rule

362 mm

Is the

tube

shaft fitted with a continuous liner

Yes

Liners, thickness in way of bushes

as per Rule

21 mm

Thickness between bushes

as per Rule

16 mm

Is the after end of the liner made watertight in the

After boss

Yes

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

Yes 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

If liners are fitted, is the shaft lapped or protected between the liners

Yes

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

of the tube shaft

Length of Bearing in Stern Bush next to and supporting propeller

1820 mm

Pitch

11.9

No. of blades

3

Material

Brass

whether Moveable

No

Total Developed Surface

35.5 sq. feet

Kind of reversing Engines

Air Engine

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

Yes

Are the exhaust pipes and silencers water cooled or lagged with

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

Suction Water Pumps, No.

Two

Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Yes

Pumps worked from the Main Engines, No.

each engine

Diameter

140 mm

Stroke

320 mm

Can one be overhauled while the other is at work

Yes

Pumps connected to the Main Bilge Line

No. and Size

2 - 60 lins each

How driven

Suction Pumps, No. and size

One 9" x 10" x 10" - 200 lins

Lubricating Oil Pumps, including Spare Pump, No. and size

Two C. N. 30 T Vertical

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

Pumps, &amp;c.

Independent Power Pump

Direct Suctions

to the Engine Room Bilges, No. and size

1 Duplex 200 lins &amp; 1 Centrifugal 60 lins

Are the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes

Yes

Are the Bilge Suctions in the Machinery Spaces

Are easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

Yes

Sea Connections fitted direct on the skin of the ship

Yes

Are they fitted with Valves or Cocks

Valves and cocks

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

On board

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

Do pipes pass through the bunkers

Yes

How are they protected

Yes

Do pipes pass through the deep tanks

Yes

Have they been tested as per Rule

Yes

Are 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

No tunnel

Is it fitted with a watertight door

Yes

worked from

Yes

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

Air Compressors, No.

each engine

No. of stages

3

Diameters

570/480/150

Stroke

400 mm

Driven by Main Engine

Auxiliary Air Compressors, No.

Two

No. of stages

Two

Diameters

240/80

Stroke

140 mm

Driven by Auxiliary Diesel Eng

Auxiliary Air Compressors, No.

One

No. of stages

Two

Diameters

Stroke

Driven by Steam

Suctioning Air Pumps, No.

One each engine

Diameter

1340 mm

Stroke

650 mm

Driven by Main Engine

Suctioning Engines crank shafts, diameter

as per Rule

135 mm

## RECEIVERS:—

Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Yes

Are the internal surfaces of the receivers be examined

Yes

What means are provided for cleaning their inner surfaces

Fitted with manhole doors

Are there a drain arrangement fitted at the lowest part of each receiver

Yes

High Pressure Air Receivers, No.

2 x 2

Cubic capacity of each

150 + 400 litres

Internal diameter

thickness

Are they seamless, lap welded or riveted longitudinal joint

Seamless

Material

Steel

Range of tensile strength

Working pressure by Rules

45 lbs/cm<sup>2</sup>

Starting Air Receivers, No.

2

Total cubic capacity

24 c.m.

Internal diameter

1440/1800

thickness

30 mm

Are they seamless, lap welded or riveted longitudinal joint

Riveted

Material

Steel

Range of tensile strength

Working pressure by Rules

30 lbs/cm<sup>2</sup>

013671-013677-0103

SEE CADIZ LETTER 2.6.34  
AND APPROVED ALANS



IS A DONKEY BOILER FITTED? *yes two* If so, is a report now forwarded? *yes*  
PLANS. Are approved plans forwarded herewith for Shafting *✓* Receivers *✓* Separate Tanks *✓*  
(If not, state date of approval)  
Donkey Boilers *✓* General Pumping Arrangements *✓* Oil Fuel Burning Arrangements *✓*  
SPARE GEAR *Supplied complete as per rules. ✓*

The foregoing is a correct description.  
**SOCIEDAD ESPAÑOLA DE CONSTRUCCIÓN NAVAL**  
*Antonio L. Guirao*

Manufacturer.

Dates of Survey while building  
During progress of work in shop *1932 April 15 - May 18 - June 3 - 10 - 29 July 5 - 13 - 27 Aug 10 - 16 - 29 Sept 15 - 22 Oct 8 - 18 - 22 - 25 - 27 Nov 11 - 18 - 25 - 28 Dec 2 - 9 - 16 - 23 - 30*  
During erection on board vessel *1933 Jan 3 - 16 - 20 - 26 Feb 1 - 4 - 9 - 10 - 15 - 24 - 28 Mar 3 - 4 - 10 - 14 - 18 - 24 April 6 - 12 - 27 - 28 May 5 - 11 - 16 - 25 - 24 June 3 - 9 - 14 - 18 - 24*  
Total No. of visits *135*

Dates of Examination of principal parts—Cylinders *✓* Covers *✓* Pistons *✓* Rods *✓* Connecting rods *✓*  
Crank shaft *✓* Flywheel shaft *✓* Thrust shaft *✓* Intermediate shafts *✓* Tube shaft *✓*  
Screw shaft *✓* Propeller *✓* Stern tube *✓* Engine seatings *✓* Engines holding down bolts *✓*

Completion of fitting sea connections *June 3<sup>rd</sup> 33* Completion of pumping arrangements *✓* Engines tried under working conditions *April 22<sup>nd</sup> 33*

Crank shaft, Material *SM Steel* Identification Mark *23+28-6-32*  
Flywheel shaft, Material *SM Steel* Identification Mark *28-5-13*  
Thrust shaft, Material *SM Steel* Identification Mark *28-5-13*  
Intermediate shafts, Material *SM Steel* Identification Marks *28-5-13*  
Tube shaft, Material *✓* Identification Mark *28-5-13*  
Screw shaft, Material *SM Steel* Identification Mark *28-5-13*

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 *"Campeche"*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The above machinery has been made on board under special survey in accordance with the Society's Rules and Regulations. The workmanship quite good, all pipes, valves, cocks & connections have been tested by hydraulic pressure in accordance with the rules.*

*The alignment of shafting carefully checked and found correct.  
The main motors and all auxiliary machinery and their accessories have been officially tested at sea and found to be satisfactory.  
The safety valves of air receivers were adjusted to 30 lb.  
In my opinion this vessel's machinery is eligible to be entered in the Register Book with notation of LMC 5-34.*

The amount of Entry Fee ... £ *60-0-0* When applied for, *18<sup>th</sup> Apr 1934*  
Special ... £ : :  
Donkey Boiler Fee ... £ : : When received, *18<sup>th</sup> Apr 1934*  
Travelling Expenses (if any) £ : : *18<sup>th</sup> Apr 1934*

Committee's Minute **FRL 15 JUN 1934**

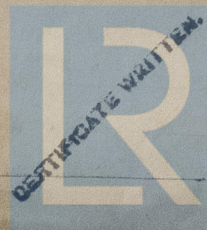
Assigned

*+ L.M.C. 5,34*

*Oil Eng.*

*F.D. C.L.*

*2 DR 150.00*



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