

ected as Rpt. 4b  
essel.

# REPORT ON OIL ENGINE MACHINERY.

No. 3957

Date of writing Report 12-1-34 When handed in at Local Office 12-1-34 Port of BARCELONA Received at London Office 16 JAN 1934

No. in Survey held at BARCELONA Date, First Survey 13-7; 32 Last Survey 3-1-34  
leg. Book. *1178* Number of Visits 63

*Single*  
*on the* *Twin*  
*Triple*  
*Quadruple*  
Screw vessel M/V "CAMPILO" Tons <sup>Gross</sup> <sub>Net</sub>

Built at Valencia By whom built Unión Naval de Levante Yard No. 22 When built

Engines made at Barcelona By whom made La Maquinista Terrestre y Marítima Engine No. 1&2 When made 1933

Donkey Boilers made at Valencia By whom made Unión Naval de Levante Boiler No. When made 1933

Brake Horse Power 1950 Owners C.A.M.P.S.A. Port belonging to  
Nom. Horse Power as per Rule 543 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which vessel is intended *2178* *39318*

Vertical heavy oil engines air injection cycle 4 Single or double acting Single  
Type of Engine Vertical heavy oil engines air injection cycle 4 Single or double acting Single

Maximum pressure in cylinders 40 Kgs/cm Diameter of cylinders 550 m/m Length of stroke 1000m/m No. of cylinders 2x6 No. of cranks 2x6

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 710 m/m Is there a bearing between each crank Yes

Revolutions per minute 125 *turning* Wheel dia. 1362 m/m Weight 850 Kgs Means of ignition Air compression of fuel used Crude oil flash point above 150°F

Crank Shaft, dia. of journals as per Rule 329 m/m Crank pin dia. 345 m/m Crank Webs Mid. length breadth 696 m/m Thickness parallel to axis 215 m/m  
as fitted 345 m/m Mid. length thickness 195 m/m Thickness around eye-hole 170 m/m

Intermediate Shafts, diameter as per Rule 283.7 m/m Thrust Shaft, diameter at collars as per Rule 298 m/m  
as fitted 286 m/m as fitted 345 m/m

Screw Shaft, diameter as per Rule 308 m/m Is the tube screw shaft fitted with a continuous liner Yes  
as fitted 311 m/m

Liner thickness in way of bushes as per Rule 17 m/m Thickness between bushes as per rule 12.75m/m  
as fitted 20m/m & 22m/m as fitted 14.5m/m Is the after end of the liner made watertight in the

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

Does 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 Fitting

Do liners are fitted, is the shaft lapped or protected between the liners Is an approved Oil Gland or other appliance fitted at the after

of the tube shaft Wood Length of Bearing in Stern Bush next to and supporting propeller 1.600 m

Propeller, dia. 3506 m/m Pitch 3048m/m No. of blades 3 Material Bronze whether Moveable No Total Developed Surface 2.88m<sup>2</sup> sq. feet

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

Lubrication Thickness of cylinder liners 38-30 m/m Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with

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

Drinking Water Pumps, No. 2 off centrifugal pumps 150 tons each Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Other Pumps worked from the Main Engines, No. each eng. of trunk Diameter 150m/m Stroke 175m/m Can one be overhauled while the other is at work Yes

Pumps connected to the Main Bilge Line No. and Size How driven

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

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

Pumps, No. and size:—In Machinery Spaces

Holds, &c.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

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

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

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

Are they fixed sufficiently high, on the ship's side to be seen without lifting the platform plates Are the Overboard Discharges above or below the deep water line

Are they each filled with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate

Are the pipes pass through the bunkers How are they protected

Are the 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

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 Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

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

Air Compressors, No. 2 off No. of stages 3 Diameters 600-540-120 m/m 320m/m Driven by main eng.

Auxiliary Air Compressors, No. 2 off No. of stages 3 Diameters 320-280-70 m/m 170m/m Driven by aux. eng.

Hand Auxiliary Air Compressors, No. 1 off No. of stages 2 Diameters 90-36m/m Stroke 120m/m Driven by hand

Engining Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule 162m/m. Aux. Diesel oil eng. 2 off-3 cyl-4SCSA-150BHP each-Cyl. dia. 310m/m Stroke 350m/m  
as fitted 170m/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

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

High Pressure Air Receivers, No. 2 off (working) Working 150 litres each 318m/m 12.5m/m  
2 off (reserved) Reserve 300 " Internal diameter 448m/m 17.5m/m

Seamless, lap welded or riveted longitudinal joint Seamless Material SM Steel Range of tensile strength 45.4/46.4 Working pressure by Rule 74.5Kgs/cm<sup>2</sup> (Actual 77.4Kgs/cm<sup>2</sup> (65ATM)

Starting Air Receivers, No. 2 Total cubic capacity 20 cub. metres Internal diameter 1544m/m Thickness 22m/m

Seamless, lap welded or riveted longitudinal joint Rivetted Material SM Steel Range of tensile strength 44/50Kgs Working pressure by Rule 25.4Kg/cm<sup>2</sup> (Actual 25Kg/cm<sup>2</sup>)



01120-01129-0202

IS A DONKEY BOILER FITTED? Yes If so, is a report now forwarded? Previously forwarded  
 PLANS. Are approved plans forwarded herewith for Shafting 11-11-32 Receivers 11-11-32 Separate Tanks  
 Donkey Boilers 1 General Pumping Arrangements 1 Oil Fuel Burning Arrangements 1  
 SPARE GEAR Spare gear as required by the Rules has been supplied.  
 A complete list of spare gear supplied is shown on the accompanying list.

The foregoing is a correct description,

*J. H. Smith* Manufacturer.

Dates of Survey while building  
 During progress of work in shops - 1932 July 13 Aug 2.9 Sept 7.16.26 Oct 7.8.18 Nov 4.17.22 Dec 7.21 1933 Jan 5.12.30 Feb 4.11.21 Mar 10 April 14.8.26  
 During erection on board vessel - June 8.10.13.17.21.29 July 4.13.25.26 Aug 2.8.12.21.26 Sept 2.15 Oct 3.9.16.14.21.26.30 Nov 6.10.20.23.25.29 Dec 7 1934

Dates of Examination of principal parts - Cylinders 12-8-33 Covers 12-8-33 Pistons 12-8-33 Rods 15-5-33 Connecting rods 12-5-33  
 Crank shaft S.26-7-33 Flywheel shaft P.28-8-33 Thrust shafts 26-7-33 & 28-8-33 Intermediate shafts 28-8-33 Tube shaft  
 Screw shaft Propeller Stern tubes 12-5-33 & 15-5-33 Engine seatings Engines holding down bolts in shop S.10-11-33  
 Completion of fitting sea connections Completion of pumping arrangements S.26-7-33.GJT Engines tried under working conditions P.14-12-33  
 Crank shaft, Material SM Ingot steel Identification Mark P.28-8-33.GJT Flywheel shaft, Material Identification Mark S.28-8-33  
 Thrust shaft, Material SM Ingot steel Identification Mark P.28-8-33.GJT Intermediate shafts, Material SM Ingot steel Identification Marks P.28-8-33  
 Tube shaft, Material Identification Mark Screw shaft, Material SM Ingot steel Identification Mark

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  
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo If so, have the requirements of the Rules been complied with  
 Is this machinery duplicate of a previous case If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.) This machinery has been constructed under Special Survey in accordance with the Society's Rules and approved plans and the materials and workmanship are good. The machinery has been finally examined under full working conditions on the test bed and found, as far as can be seen, to be satisfactory in every respect.  
The material used in the construction of the engines and air receivers has been tested as required by the Rules, the corresponding certificates being attached herewith.

Recommended the vessel's machinery to have notation of +LMC with date and "OIL ENGINE" when machinery has been fitted onboard and tested to the satisfaction of the Surveyors to this Society.

The amount of Entry Fee ... £ 8 : - : When applied for, 24.1.34 from Lon.  
 Special Air Receivers ... £ 155 : - :  
 Donkey Boiler Fee ... £ 12 : - :  
 Travelling Expenses (if any) £ 1 : 10/- : 10.3.34 W

*Wm. S. Thoma*  
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute  
 Assigned See Val. 300

FRI, 20 JUL 1934



Certificate (if required) to be sent to  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)  
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