

REPORT ON OIL ENGINE MACHINERY.

No. 8170.

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Copenhagen

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Copenhagen

Date, First Survey 6th August 1929 Last Survey 30th January 1930

Number of Visits

Single
on the ~~Twin~~
Triple } Screw vessel
Quadruple }Tons } Gross
Net

Built at Bilbao.

By whom built *Messa Compania Euskalduna de Construcion y Reparacion de Buques*

Yard No. 91 When built

Engines made at Copenhagen

By whom made *Messa Akt. Burmeister & Wain*

Engine No. 1724 When made 1929-30

Donkey Boilers made at

By whom made

Boiler No. When made

Brake Horse Power 1200.

Owners

Port belonging to

Nom. Horse Power as per Rule 272.

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Trade for which vessel is intended

OIL ENGINES, &c. ^{one off} Type of Engines *Vertical Diesel Oil Engine, Crosshead type, Solid injection.* 2 or 4 stroke cycle 4 Single or double acting SingleMaximum pressure in cylinders 39 kg./cm² Diameter of cylinders 550 mm = 21 5/8" Length of stroke 1000 mm = 39 3/8" 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

Revolutions per minute 125. ^{Turning} Wheel dia. 1362 mm Weight 839 kg.Means of ignition *Air compression* Kind of fuel used *Crude oil flash point above 180°F*

Crank Shaft, dia. of journals as per Rule 339.98 mm

Crank pin dia. 345 mm

Crank Webs Mid. length breadth 696 mm

Thickness parallel to axis 215 mm

Combined with Exhaust Shaft.

as fitted 345 mm

M d. length thickness 195 mm

Thickness around eye hole 170 mm

Flywheel Shaft, diameter as per Rule

Intermediate Shafts, diameter as per Rule 9.61"

Thrust Shaft, diameter at collars as per Rule 10.09"

Tube Shaft, diameter as fitted

Screw Shaft, diameter as fitted 10 3/4"

Is the ~~tube~~ screw shaft fitted with a continuous liner

Bronze Liners, thickness in way of bushes as per Rule 0.623"

Thickness between bushes as per rule 0.468"

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 *Liner in 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 *yes* Is an approved Oil Gland or other appliance fitted at the after end of the tubeshaft *yes* If so, state type *yes* 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 *Blade-bronze whether Moveable yes* Total Developed Surface 41.5 sq. feetMethod of reversing Engines *Direct reversible* Is a governor or other arrangement fitted to prevent racing of the engine *when disclutched yes* Means of lubrication*Fixed lubrication* Thickness of cylinder liners 38 mm Are the cylinders fitted with safety valves *yes* Are the exhaust pipes and silencers water cooled or lagged withnon-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 *yes*Cooling Water Pumps, No. 2 off *Centrifugal pumps, 60 tons 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. 1 off - 17 tons Diameter of trunk 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 *yes* How driven *yes*Ballast Pumps, No. and size 1 off *Duplex piston pump, 250 tons* Lubricating Oil Pumps, including Spare Pump, No. and size 2 off *Log wheel pumps, 25 tons each.*Are two independent means arranged for circulating water through the Oil Cooler *yes* Suctions, connected to both Main Bilge Pumps and Auxiliary BilgePumps, No. and size:—In Machinery Spaces *yes*In Holds, &c. *yes*Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *yes*Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes *yes* Are the Bilge Suctions in the Machinery Spacesled 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 *yes*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 *yes* How are they protected *yes*What pipes pass through the deep tanks *yes* 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 *yes*If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork *yes*Main Air Compressors, No. *none* No. of stages *yes* Diameters *A B* Stroke *yes* Driven by *yes*Auxiliary Air Compressors, No. 2 off No. of stages 2 Diameters 320 mm - 280 mm Stroke 170 mm Driven by *Auxiliary engines.*Small Auxiliary Air Compressors, No. off No. of stages 2 Diameters 90 mm - 35 mm Stroke 120 mm Driven by *Hand.*Scavenging Air Pumps, No. *yes* Diameter *yes* Stroke *yes* Driven by *yes*

Auxiliary Engines crank shafts, diameter as per Rule 161.8 mm. Auxiliary engines: 2 off, 3 Cyl. 4 S.C.S.A. Diesel oil engines. 150 B.H.P. each. Cyl diam 310 mm Stroke 350 mm.

as fitted 162 mm. Each engine working a direct coupled 100 K.W. Generator.

AIR 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 *The starting air receiver is provided with man hole.*Is there a drain arrangement fitted at the lowest part of each receiver *yes*

Emergency Starting High Pressure Air Receivers, No. 1 off Cubic capacity of each 250 litres Internal diameter 380 mm thickness 11 mm

Seamless, lap welded or riveted longitudinal joint *Lap welded* Material *S.M. Steel* Range of tensile strength 38.2 kg/mm² Working pressure by Rules 32.2 kg/cm²

Starting Air Receivers, No. 1 off Total cubic capacity 390 Cubic feet. Internal diameter 6'-0" thickness ends 1 5/16"

Seamless, lap welded or riveted longitudinal joint *Double butt straps* Material *S.M. Steel* Range of tensile strength 46.2-48.2 kg/mm² Working pressure by Rules 25.9 kg/cm²

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