

REPORT ON OIL ENGINE MACHINERY.

No. 10/30.

80 JAN 1937

Received at London Office

Date of writing Report 28/1 1937 When handed in at Local Office 10 Port of Copenhagen
No. in Survey held at Copenhagen Date, First Survey 20/8 1936 Last Survey 6/1 1937
Reg. Book. Number of Visits 23
on the Single Screw vessel "LEGAZPI" (designated VISAYAN L) Tons Gross
Triple Net
Built at Hongkong By whom built Hongkong-Whampoa Dock Co. Ltd. Yard No. 767 When built 1936
Engines made at Copenhagen By whom made Birmister & Wain Engine No. 460 When made 1936
Donkey Boilers made at Copenhagen By whom made Birmister & Wain Boiler No. 460 When made 1936
Brake Horse Power 1750 Owners Copenhagen Port belonging to Copenhagen
Nom. Horse Power as per Rule 337 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No
Trade for which vessel is intended 1937

IL ENGINES, &c. Type of Engines Vertical Diesel, trunk type, solid injection 2 or 4 stroke cycle 2 Single or double acting single
Maximum pressure in cylinders 49 kg/cm² Diameter of cylinders 500 mm Length of stroke 900 mm No. of cylinders 5 No. of cranks 5
Mean Indicated Pressure 6.8 kg/cm² Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 686 mm Is there a bearing between each crank Yes
Revolutions per minute 160 Flywheel dia. 1652 mm Weight 8000 kg Means of ignition Compression Kind of fuel used Crude oil, 76.0 ab. 150°F
Crank Shaft, dia. of journals as per Rule 320 mm Crank pin dia. 340 mm Crank Webs 620 mm Mid. length breadth 108 mm Thickness parallel to axis 108 mm
as fitted 340 mm 115 mm central hole Mid. length thickness 192 mm Thickness around eyehole 175 mm
Flywheel Shaft, diameter as per Rule 320 mm Intermediate Shafts, diameter as per Rule 320 mm Thrust Shaft, diameter at collars as per Rule 300 mm
as fitted 320 mm as fitted 320 mm as fitted 300 mm
Tube Shaft, diameter as per Rule 320 mm Screw Shaft, diameter as per Rule 320 mm Is the tube screw shaft fitted with a continuous liner No
as fitted 320 mm as fitted 320 mm
Bronze Liners, thickness in way of bushes as per Rule 36 mm Thickness between bushes as per Rule 36 mm Is the after end of the liner made watertight in the
as fitted 36 mm as fitted 36 mm 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 Yes
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 tube Yes
shaft Yes If so, state type Oil Gland Length of Bearing in Stern Bush next to and supporting propeller 48 sq. feet
Propeller, dia. 11'-5" Pitch 8'-3" No. of blades 4 Material Brass whether Moveable No Total Developed Surface 48 sq. feet
Method of reversing Engines direct reversible Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication forced
Thickness of cylinder liners 36 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with
non-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. 1 off 2 cpl. diff. Pump 900 gpm 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. 2 off 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 150 mm How driven Electric
Is the cooling water led to the bilges Yes If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping
arrangements Yes
Ballast Pumps, No. and size 1 off 2 cpl. diff. Pump 900 gpm Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 off 2 cpl. diff. Pump 900 gpm
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 Yes In Pump Room 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 Spaces
ed 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 1 Diameters 150 mm Stroke 175 mm Driven by Electric
Auxiliary Air Compressors, No. None No. of stages 1 Diameters 150 mm Stroke 175 mm Driven by Electric
Small Auxiliary Air Compressors, No. None No. of stages 1 Diameters 150 mm Stroke 175 mm Driven by Electric
Scavenging Air Pumps, No. 1 off 168 m³/min. Diameter 150 mm Stroke 175 mm Driven by Main Engine
Auxiliary Engines crank shafts, diameter as per Rule 320 mm No. 1 Position 150 mm
as fitted 320 mm

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AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule.

Can the internal surfaces of the receivers be examined and cleaned.

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

High Pressure Air Receivers, No.

Cubic capacity of each

Internal diameter

thickness

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure by Rules
Actual

Starting Air Receivers, No.

Total cubic capacity

Internal diameter

thickness

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
(If not, state date of approval)

Receivers

Separate Fuel Tanks

Donkey Boilers

General Pumping Arrangements

Pumping Arrangements in Machinery Space

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

The foregoing is a correct description,

BURMEISTER & WAINSKIN-DE SKIBSBYGGERI

Manufacturer.

Dates of Survey while building
During progress of work in shops-- 20/8-27/8-7/9-11/9-14/9-18/9-24/9-30/9-20/10-13/11-16/11-19/11-20/11-23/11-24/11-27/11-2/12-4/12-8/12-10/12-14/12-1936-4/1-6/1.
During erection on board vessel--
Total No. of visits 23.

Dates of Examination of principal parts—Cylinders with Covers 14/9-14/11-19/11 Pistons 24/11-26-4/1-37 Rods 20/8-16/11-27/11
Crank shaft 27/8-7/9-24/9-30/9-20/10 Flywheel shaft Thrust shaft 18/9-16/11 Intermediate shafts Tube shaft
Screw shaft Propeller Stern tube Engine seatings Engines holding down bolts

Completion of fitting sea connections Completion of pumping arrangements Engines tried under working conditions 8/12-10/12
Crank shaft, Material S.M. Steel Identification Mark 16.11.36 Flywheel shaft, Material Identification Mark
Thrust shaft, Material S.M. Steel Identification Mark 16.11.36 Intermediate shafts, Material Identification Marks
Tube shaft, Material Identification Mark Screw shaft, Material 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

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

If so, state name of vessel.

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

This engine has been constructed under special survey and in accordance with the Society's Rules, the approved plan of engine & thrust shaft and the requirements contained in the Surveyor's letter of 17/1936. The material has been examined and tested as per Rules and found good and the workmanship is of good description throughout. The engine has been tested under full power working conditions and was found to work satisfactorily.

The amount of Entry Fee .. KR 89.60: When applied for, 28-1-1937
4/5 Special ... £ 1353.84: When received, 20-3-1937
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) £ :
FRI 18 JUN 1937

Committee's Minute

Assigned

See J.E. Mchey R.R.

Philip St. Moberg
Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation