

REPORT ON OIL ENGINE MACHINERY.

PACUARE 2x

No.

408

Received at London Office

14 JUN 1947

Writing Report 1 - 5 - 1947 When handed in at Local Office 19 Port of Hamburg

Survey held at Hamburg Date First Survey 28 - 1 - 46. Last Survey 6 - 3 - 1947

Number of Visits 32

Tons Gross - Net -

Single Screw vessel "Empire Alde" (ex Pelikan)

Bremen-Vegesack By whom built Bremer Vulkan

Yard No. 712 When built 1935

Bremen-Vegesack By whom made Bremer Vulkan

Engine No. 342/46 When made 1935

Boilers made at - By whom made -

Boiler No. - When made -

Horse Power 3.050 Owners Elders and Fyffes, Ltd.

Port belonging to London

Horse Power as per Rule - Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

For which vessel is intended Carriage of fruit cargoes.

Engines, &c. - Type of Engines M.A.N. D5 Zu 60/90 airless injection 2 or 4 stroke cycle 2 Single or double acting double

Pressure in cylinders 48.5 kg/cm² Diameter of cylinders 600 mm Length of stroke 900 mm No. of cylinders 5 No. of cranks 5

Indicated Pressure upper approx. 5 kg/cm² lower approx. 4.5 kg/cm² Is there a bearing between each crank Yes

Bearings, adjacent to the crank, measured from inner edge to inner edge 865 mm Means of ignition injection Kind of fuel used Diesel oil

Revolutions per minute 130 Flywheel dia. 2190 mm Weight - Mid. length breadth 560 mm Thickness parallel to axis solid

(Solid forged) dia. of journals as per Rule - Crank pin dia. 418 mm Crank webs Mid. length thickness 235 mm Thickness around eye hole crank shaft

(Semi built) as fitted 420 mm Thrust Shaft, diameter at collars Collar 800x130 mm

(All built) as per Rule - Intermediate Shafts, diameter as fitted -

Shaft, diameter as fitted 390 mm Screw Shaft, diameter as fitted 338 mm Is the shaft fitted with a continuous liner Yes

Liners, thickness in way of bushes as per Rule - Thickness between bushes as fitted - 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 -

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-

ve - 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

tube shaft No If so, state type - Length of bearing in Stern Bush next to and supporting propeller inner 535 mm outer 1900 mm

Propeller, dia. 1653 mm Pitch 139 25/32 No. of blades 4 Material Bronze whether moveable No Total developed surface 62.95 sq. feet

Kind of reversing Engines direct Is a governor or other arrangement fitted to prevent racing of the engine when detached Yes Means of

operation forced Thickness of cylinder liners 40 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled

ed with non-conducting material lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned

the engine - Cooling 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. Diameter - Stroke - Can one be overhauled while the other is at work -

connected to the Main Bilge Line No. and size Two - Bilge & ballast - Bilge 264 galls/min. Ballast 440 galls/min.

How driven Electrically

cooling water led to the bilges overboard If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

ements - one - M.E. driven 30 tons/hr. one - stand by - 132 galls/min.

Pumps, No. and size one - 440 galls/min. Power Driven Lubricating Oil Pumps, including spare pump, No. and size one - stand by - 132 galls/min.

o independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both main bilge pumps and auxiliary

pumps, No. and size 4 of 80 mm bore In machinery spaces 60 mm, frames 66/67 one of 60 mm, 92/93 one of 60 mm

ls, &c. 6 of 90 mm bore - cofferdams - frames 41/42 pt stbd 60 mm, frames 66/67 one of 60 mm, 92/93 one of 60 mm

endent Power Pump Direct Suctions to the engine, room bilges, No. and size One - 100 mm bore ? 100 mm @ 100 ft (1 Bilge Pump)

the bilge suction pipes in holds and tunnel well fitted with strum-boxes Yes Are the bilge suction pipes in the machinery spaces led from easily

ble 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 No boxes Are they fitted with valves or cocks valves Are they fixed

ntly 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

y 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 -

pipes pass through the bunkers Combined O.F. filling and ballast How are they protected not protected - steel & C.I.

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

pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times Yes

rrangement 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

or from one compartment to another screw left valves on ballast lines Is it fitted with a watertight door Yes worked from main deck level

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

Air Compressors, No. - No. of stages - diameters - stroke - driven by Diesel motor

ry Air Compressors, No. 2 No. of stages two diameters L.P. 95 mm L.P. 245 mm stroke 220 mm driven by three clutch

Auxiliary Air Compressors, No. one No. of stages one diameters 75 mm stroke 70 driven by Hand

rovision is made for first charging the air receivers Hand compressor

ging Air Pumps, No. One diameter 2 - 54 11/32" stroke 28"/32" driven by Main Engine

ry Engines crank shafts, diameter as per Rule - 135 mm (journal) 125 mm (pin) No. 3 of 6 cylinder - one of 3 cylinder

Position Port side - engine room

Is a report sent herewith

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AIR RECEIVERS:—Have they been made under survey..... State No. of report or certificate.....
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 ✓
Injection Air Receivers, No..... Cubic capacity of each..... Internal diameter..... thickness.....
Seamless, lap welded or riveted longitudinal joint..... Material..... Range of tensile strength..... Working pressure.....
Starting Air Receivers, No..... 2 ✓ Total cubic capacity..... 445 cu ft Internal diameter..... thickness.....
Seamless, lap welded or riveted longitudinal joint..... riveted Material..... Steel Range of tensile strength..... Working pressure.....
by Rules..... Actual..... 426 lbs/sq. in.

IS A DONKEY BOILER FITTED..... No 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..... Receivers..... Separate fuel tanks.....
(If not, state date of approval)..... as fitted, yes Pumping arrangements in machinery space..... as fitted, yes
Donkey boilers..... General pumping arrangements.....
Oil fuel burning arrangements.....

SPARE GEAR.

Has the spare gear required by the Rules been supplied..... Yes ✓
State the principal additional spare gear supplied..... one upper and one lower cylinder cover.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building
During progress of work in shops - -
Special Survey: Jan. 46: 28th, Feb: 2nd, 6th, 27th, Mar: 4th, 5th, 11th, 14th, Apr: 1st, 10th, May: 2nd, 22nd, 29th, June: 13th, July: 2nd, 3rd, 8th, Aug: 8th, Oct: 8th, 17th, 22nd, 23rd, 28th, 30th, Nov: 11th, 27th, Dec: 4th, 13th
on board vessel - - Jan. 47: 28th, Feb: 20th, Mar: 5th, 6th.
Total No. of visits..... 32

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..... Engine holding down bolts.....
Completion of fitting sea connections..... Completion of pumping arrangements..... Engines tried under working conditions.....
Crank shaft, material..... Identification mark..... Flywheel shaft, material..... Identification mark.....
Thrust shaft, material..... Identification mark..... Intermediate shafts, material..... Identification marks.....
Tube shaft, material..... Identification mark..... Screw shaft, material..... Identification mark.....
Identification marks on air receivers.....

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
Description of fire extinguishing apparatus fitted..... in E.R. 4 patent foam type - one chemical type for switchboard. In holds - CO 2.
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..... If so, state name of vessel.....

General Remarks (State quality of workmanship, opinions as to class, &c.....)
This vessel's main and auxiliary machinery has been examined in detail throughout, including all modifications to the pumping and ballast arrangements as indicated on Deutsche Werft Plan No RM53 1009 D3, submitted for approval.
All parts were found to be or have now been placed in an efficient condition and have been examined under full working conditions with satisfactory results.
It is submitted that this vessel's machinery is eligible to receive the Society's class in the Register Book with record of LMC 3.47 when the pumping arrangements have been modified in accordance with approved Bilge & Ballast Pipe Plan Deutsche Werft RM53 approved P.M.19-3-47.

The amount of Entry Fee LMC ... £172 : 10

Special ... £ :

Donkey Boiler Fee... £ :

Travelling Expenses (if any) £ :

When applied for..... 19

When received..... 19

(Committee's Minute

Assigned

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register
Foundation