

REPORT ON OIL ENGINE/ELECTRIC GENERATOR SETS.

FOR

No. 1297

Received at London Office 7 MAR 1949

Date of writing Report Mar. 3rd 1949 When handed in at Local Office 19 Port of Cleveland, Ohio.

No. in Reg. Book. Survey held at Beloit, Wisconsin. Date, First Survey January 16th Last Survey April 14th, 1948. Number of Visits 4

on the Twin Triple Quadruple Screw vessel 220' Portuguese Vessels - 20 B.H.P. AUXILIARY ENGINES Tons Gross - Net -

Built at Quebec, Canada. By whom built St. Lawrence Metals & Marine Works, Ltd. Yard No. - When built -

Owners Portuguese Interests Port belonging to -

Oil Engines made at Beloit, Wis. By whom made Fairbanks Morse & Co. Engine 909356 Contract No. 912013 When made 1948

Generators made at - By whom made - Contract No. 912016 When made -

No. of Sets 4 Engine Brake Horse Power 20 Nom. Horse Power as per Rule - Total Capacity of Generators - Kilowatts.

OIL ENGINES, &c.—Type of Engines Vertical Solid Injection Diesel 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 800 psi Diameter of cylinders 4.25" Length of stroke 6" No. of cylinders 2 No. of cranks 2

Mean Indicated Pressure: 103.4 psi Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 4.75" Is there a bearing between each crank Yes

Revolutions per minute 1200 Flywheel dia. 24" Weight 436 lbs Means of ignition Air Comp Kind of fuel used Diesel Oil

Crank Shaft, dia. of journals 3" as per Rule - as fitted 3" Crank pin dia. 2.75" Crank Webs Mid. length breadth 5.375" Thickness parallel to axis - Mid. length thickness 1.3175" Thickness around eyehole -

Flywheel Shaft, diameter 3" as per Rule - as fitted 3" Intermediate Shafts, diameter - as per Rule - as fitted - Thickness of cylinder liners 0.3125"

Is a governor or other arrangement fitted to prevent racing of the engine when deatched Yes Means of lubrication Forced Feed

Are the cylinders fitted with safety valves No Are the exhaust pipes and silencers water cooled or lagged with non-conducting material -

Cooling Water Pumps, No. (1) Gear Type 10 GM Is the sea suction provided with an efficient strainer which can be cleared within the vessel -

Lubricating Oil Pumps, No. and size (1) Gear Type 1.75 GM (Lube Oil & Cooling Water Pump driven by engine)

Air Compressors, No. None No. of stages - Diameters - Stroke - Driven by -

Scavenging Air Pumps, No. None Diameter - Stroke - Driven by -

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 -

Can the internal surfaces of the receivers be examined - What means are provided for cleaning their inner surfaces -

Is there a drain arrangement 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 -

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 -

ELECTRIC GENERATORS:—Type -

Pressure of supply - volts. Full Load Current - Amperes. Direct or Alternating Current -

If alternating current system, state the periodicity - Has the Automatic Governor been tested and found as per rule when full load is suddenly

thrown on and off - Generators, are they compounded as per rule - is an adjustable

regulating resistance fitted in series with each shunt field - Are all terminals accessible, clearly marked, and furnished with

sockets - Are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched -

Are the lubricating arrangements of the generators as per Rule - If the generators are under 100 kw. full load rating, have the Makers supplied

certificates of test - and do the results comply with the requirements - If the generators are 100 kw. or over have they been

built and tested under survey -

PLANS. Crank Shaft Approved N.Y. Are approved plans forwarded herewith for Shafting Oct. 31, 1935 Receivers - Separate Tanks -

(If not, state date of approval)

SPARE GEAR In accordance with Rule requirements. See Fairbanks Morse list of spare gear

No. D-3655 A L, attached to this report.

The foregoing is a correct description,

Manufacturer.



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Dates of Survey while building { During progress of work in shops -- Jan.16; Feb.18; March 24; April 14, 1948. During erection on board vessel --- - Total No. of visits 4

Dates of Examination of principal parts—Cylinders 24.3.48 Covers 24.3.48 Pistons 24.3.48 Piston rods --- Connecting rods 24.3.48 Crank and Flywheel shafts 16.1.48 Intermediate shafts --- Eng.No.909356 LR 6502 16.1.48 LA Eng.No.912013 LR 6504 16.1.48 LA Crank and Flywheel shafts, Material O.H. Drop Forged Steel Identification Marks Eng.No.912013 LR 6503 16.1.48 LA Eng.No.912016 LR 6505 16.1.48 LA Intermediate shafts, Material --- Identification Marks --- Identification marks on Air Receivers ---

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. ---)

These small auxiliary oil engines were constructed under special survey in accordance with the Rules and approved plans. On completion the engines were brake tested at full and overload power and found satisfactory. The governing devices were tried out and found efficient. The running parts were afterwards examined and found in good condition. The materials and workmanship are of good quality throughout. Attached to this report are certified copies of the drop forged steel crank shaft physical test records and engine operating test records. It is recommended that these auxiliary engines be incorporated in the vessel's machinery record of LMC (with date) previously recommended for the main propulsion engine, subject to the machinery being satisfactorily installed on board and tested under working conditions.

NOTE: Engines only furnished by Fairbanks Morse & Co., Beloit.

It is not clear whether this engine has been installed in this vessel or a sister vessel. (CARTAXO, COLAPES, COVILHA) F.H.

1M-8-46-Transfer. (Printed in U. S. A.) (The Surveyors are requested not to write on or below the space for Committee Minute.)

The amount of Fee \$240.00 : When applied for, 1/3 Credit to Montreal \$80.00 : Oct. 26 1948 Clv Travelling Expenses (if any) \$40.00 : Nov. 1 48 Note: Total fee collected at Cleveland. Nov. 26 1948 Jan. 28 49

J. A. Balliet Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 10 JUN 1949 Deferred / FRI 12 AUG 1949 See F.E. mchly rpt

