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Rpt. 4c.  
3 SEP 1949

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 1346

Received at London Office

11 AUG 1949

IN D.O.

Date of writing Report 19 When handed in at Local Office 19 Port of Cleveland, Ohio

No. in Reg. Book. Survey held at St. Louis, Missouri Date, First Survey February 4 Last Survey May 26, 19 49

Single } M.T. ISLAS MALVINAS } Number of Visits 14 }  
on the Twin } Argentine Vessel Hull No. 111 } Tons { Gross -- }  
Triple } Screw vessel Diesel Generator Sets } Net -- }  
Quadruple }

Built at Uddevalla, Sweden By whom built Uddevallavarvet Aktiebolag Yard No. 111 When built --

Owners Yacimientos Petroliferos Fiscales of Argentina Port belonging to 9236-0092

Oil Engines made at St. Louis, Mo. By whom made Busch-Sulzer Bros. Engine 9236-0098 When made 1949

Generators made at Erie, Pa. By whom made Burke Electric Co. Contract No. 164473 When made 1949

No. of Sets 4 Engine Brake Horse Power 465 ✓ Nom. Horse Power as per Rule Total Capacity of Generators 1280 ✓ Kilowatts.

OIL ENGINES, &c.—Type of Engines. Trunk piston solid injection supercharged Buchi system 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 570 psi. Diameter of cylinders 9" ✓ Length of stroke 11.5" ✓ No. of cylinders 7 ✓ No. of cranks 7 ✓

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge (3.937" 10 1/16" + 9 15/16" Is there a bearing between each crank Yes ✓

Revolutions per minute 600 ✓ Flywheel dia. 30.5 Weight 1200 lb. Means of ignition Compressor Kind of fuel used Diesel Oil ✓

Crank Shaft, dia. of journals as per Rule -- as fitted 7" ✓ Crank pin dia. 6" ✓ Crank Webs Mid. length breadth 11" ✓ Thickness parallel to axis -- Mid. length thickness 2-7/16" ✓ Thickness around eyehole --

Flywheel Shaft, diameter as per Rule -- as fitted -- Intermediate Shafts, diameter as per Rule -- as fitted -- Thickness of cylinder liners 9/16" P.M. 4/10/49

Is a governor or other arrangement fitted to prevent racing of the engine when declutched. Yes ✓ Means of lubrication Pressure ✓

Are the cylinders fitted with safety valves. Yes ✓ Are the exhaust pipes and silencers water cooled or lagged with non-conducting material. --

Cooling Water Pumps, No. 2 Is the sea suction provided with an efficient strainer which can be cleared within the vessel. --

Lubricating Oil Pumps, No. and size 1-7" dia. impeller; 1 hand pump

Air Compressors, No. -- No. of stages -- Diameters -- Stroke -- Driven by --

Turbo charger scavenging Air Pumps, No. One Buchi type exhaust turbo charger 21000 R.P.M. Driven by Exhaust Turbine

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. 2 Wire, compound, drip proof, single bearing, direct coupled, Class B insulation.

Pressure of supply 230 ✓ volts. Full Load Current 1391 ✓ Amperes. Direct or Alternating Current D.C.

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. Yes Generators, are they compounded as per rule. Yes is an adjustable

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

Are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched. Yes

Are the lubricating arrangements of the generators as per Rule. Yes 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. Yes

PLANS. Are approved plans forwarded herewith for Shafting. Receivers. Separate Tanks. (If not, state date of approval)

SPARE GEAR To Rule Requirements. See attached Busch Sulzer list of Spare Parts.

3 occasional vibration characteristics of the shafting installation of this auxiliary machinery appeared in the Secretary's letter dated 26-10-48 for a service speed of 600 R.P.M.

The foregoing is a correct description,

Manufacturer.



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Dates of Survey while building { During progress of work in shops -- Feb. 4, 19, 26; Mar. 10, 16, 24, 28; April 8, 14, 20, 28; May 6, 18, 26, 1949.  
 { During erection on board vessel ---  
 Total No. of visits 14

Dates of Examination of principal parts—Cylinders Mar. 10, 1949 Covers Mar. 10, 49 Pistons Mar. 10, 49 Piston rods --  
 Connecting rods April 8, 49 Crank and Flywheel shafts April 8, 49 Intermediate shafts --  
 Crank and Flywheel shafts, Material O.H. Steel, Forged Identification Marks LLOYDS 5915, LLOYDS 5931  
 LLOYDS 5932, LLOYDS 5934  
 LR. 1169 LR. 1171  
 Intermediate shafts, Material O.H. Steel, Forged Identification Marks LR. 1170 LR. 1172  
 Identification marks on Air Receivers --

Is this machinery duplicate of a previous case -- If so, state name of vessel. Sister Vessels-Hulls 111/113

General Remarks (State quality of workmanship, opinions as to class, &c. These auxiliary engines and generators were constructed under Special Survey in accordance with the Rules of this Society and approved plans. The materials tested by the Society's Surveyors and the quality of same and workmanship is good throughout.

On completion, each engine was brake tested at Busch-Sulzer Bros. Works, St. Louis, Missouri, under full and 10% overload power and found satisfactory. The governor controls were tested and found efficient. On completion of running tests the working parts were examined and found in good condition. Each generator was tested under full and 25% overload at the Works of Burke Electric Co., Erie, Pa., and the results found satisfactory.

The generators were shipped to St. Louis and mounted with their respective engines on a common fabricated sub base. The couplings and alignment checked and found good on each. The completed units have been shipped to the shipbuilders, Uddévalle, Sweden for installation in vessels intended for classification with this Society and it is recommended that this auxiliary machinery be included in the vessel's record of \*IMC (with date), subject to being installed and tested under working conditions to the satisfaction of the Society's Surveyors.

Attached to this report are copies of the certificate, forging reports, generator reports and spare parts lists, also approved drawings of the crankshafts, connecting rods and armature shafts.

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 £\$550.00 : { When applied for, July 26 1949 }  
 Travelling Expenses (if any) £\$250.00 : { When received, 19 }

*R. S. Waagensen*  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute  
 Assigned *Su F.B. Welch vpt*

FRI. 22 SEP 1950

