

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

DEC 1953

Date of writing Report Aug 16 1953 When handed in at Local Office \_\_\_\_\_ 19\_\_\_\_ Port of \_\_\_\_\_  
 No. in Survey held at SAN PEDRO CALIFORNIA Date, First Survey JAN 22 52 Last Survey JUN 8 1953  
 Reg. Book. \_\_\_\_\_ (No. of Visits 10)  
 on the MV POZO RICA Tons { Gross 7884  
 Net 4459  
 Built at TRIESTE By whom built CANTIERI RIUNITI DELL'ADRIATICA Yard No. 1213 When built 1938  
 Owners PETROLEOS MEXICANOS Port belonging to TAMPICO  
 Installation fitted by BUILDERS When fitted 1938  
 Is vessel equipped for carrying Petroleum in bulk YES Is vessel equipped with D.F. YES E.S.D. YES Gy.C. No Sub.Sig. \_\_\_\_\_ Radar YES

Plans, have they been submitted and approved YES System of Distribution TWO WIRE Voltage of Lighting 110  
 Heating ✓ Power 110 D.C. or A.C., Lighting DC Power DC If A.C. state frequency ✓  
 Prime Movers, has the governing been found as per Rule when full load is thrown on and off YES Are turbine emergency governors fitted with a trip switch ✓ Generators, are they compound wound YES, and level compounded under working conditions YES, if not compound wound state distance between generators ✓ and from switchboard ✓ Are the generators arranged to run in parallel YES, are shunt field regulators provided YES Is the compound winding connected to the negative or positive pole NEGATIVE Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing ✓ Have certificates of test for machines under 100 kw. been supplied ✓ and the results found as per Rule ✓

Position of Generators MAIN ENGINE ROOM. FLOOR PLATE LEV. L. STARBOARD  
 is the ventilation in way of generators satisfactory YES are they clear of inflammable material and protected from mechanical injury and damage from water, steam and oil YES Switchboards, where are main switchboards placed MAIN ENGINE ROOM. FLOOR. PLATE LEVEL STARBOARD. AFT OF GENERATORS

Are they in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water, steam and oil YES, what insulation is used for the panels DEAD FRONT SWITCH BOARD, if of synthetic insulating material is it an Approved Type ✓, if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule ✓ Is the construction as per Rule, including locking of screws and nuts AIEE STANDARDS Description of Main Switchgear for each generator and arrangement of equaliser switches DIESEL 250AMP. STEAM 50AMP. TWO POLE CIRCUIT BREAKERS WITH REVERSE CURRENT AND UNDER VOLTAGE ATTACHMENTS AND MAGNETIC EQUALISER SWITCHES

and the switch and fuse gear (or circuit breakers) for each outgoing circuit ONE 200A. TWO 100A. TWO 90A. TWO 50A. FIVE 35A. FIVE 15AMP TWO POLE THERMO TYPE CIRCUIT BREAKERS. ONE 100AMP THREE POLE KNIFE SWITCH

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule YES Instruments on main switchboard 3 ammeters 3 voltmeters ✓ synchronising devices. For compound machines in parallel are the ammeters and reversed current protection devices connected on the pole opposite to the equaliser connection ? Earth Testing, state means provided EARTH LAMPS

Switches, Circuit Breakers and Fuses, are they as per Rule AIEE STANDARDS, are the fuses an Approved Type AIEE STANDARDS, make of fuses AIEE STANDARDS, are all fuses labelled YES If circuit breakers are provided for the generators, at what overload do they operate 125%, and at what current do the reversed current protective devices operate 10%

Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule YES  
 Cables, are they insulated and protected as per Rule YES, if otherwise than as per Rule are they of an Approved Type AIEE STANDARDS, state maximum fall of pressure between bus bars and any point under maximum load 2%, are the ends of all cables having a sectional area of 0.01 square inch and above provided with soldering sockets YES AND AIEE STANDARDS Are all ~~paper insulated and~~ varnished cambric insulated cables sealed at the ends YES Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage YES, are any cables laid under machines or floorplates ✓, if so, are they adequately protected YES Are cables in machinery spaces, galleys, laundries, etc., lead covered YES or run in conduit ✓ or of the "HR" type ✓ State how the cables are supported or protected ALL CABLES ARE LEAD AND ARMOURED

TYPE SUPPORTED ON STANDARD TYPE HANGERS WITH CABLE GUARDS AS REQUIRED. ALL CABLES IN WAY OF FORE AND AFT GANGWAYS ARE IN HEAVY GALVANISED PIPES

Are all lead sheaths, armouring and conduits effectually bonded and earthed YES Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands YES, where unarmoured cables pass through beams, etc., are the holes effectively bushed YES Refrigerated chambers, are the cables and fittings as per Rule YES

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule YES Emergency Supply, state position YES

Navigation Lamps, are they separately wired YES controlled by separate double pole switches and fuses YES Are the switches and fuses in a position accessible only to the officers on watch YES, is an automatic indicator fitted YES Is an alternative supply provided NO

Secondary Batteries, are they constructed and fitted as per Rule YES, are they adequately ventilated YES state battery capacity in ampere hours YES

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof YES Are any fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present YES if so, how are they protected EXPLOSION PROOF LIGHTS IN MAIN DECK FOR PUMPROOMS and where are the controlling switches fitted OUTSIDE THE COMPARTMENTS Are all fittings suitably ventilated YES

Searchlight Lamps, No. of ONE, whether fixed or portable PORTABLE, are they of the carbon arc or of the filament type FILAMENT

Heating and Cooking, is the general construction as per Rule YES, are the frames effectually earthed YES, are heaters in the accommodation of the convection type YES Motors, are all motors constructed and installed as per Rule and placed in well-ventilated compartments in which inflammable gases cannot accumulate and protected from damage from water, steam and oil YES Are motors coupled to oil fuel transfer and pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment YES Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing YES Have certificates of test for motors under 100 BHP intended for essential sea services been supplied and the results found as per Rule YES

Control Gear and Resistances, are they constructed and fitted as per Rule YES <sup>AIEE</sup> STANDARDS Lightning Conductors, where required are they fitted as per Rule YES Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships been complied with YES, are all fuses of an Approved Cartridge Type YES, make of fuse AIEE STANDARDS Are the fittings for pump rooms, tween deck spaces, etc., in accordance with the special requirements for such ships YES Are the cables lead covered as per Rule YES E.S.D., if fitted state maker CO BOSTON location of transmitter PUMPROOM AFT and receiver PUMPROOM AFT

Spare Gear, if the vessel is for open sea service have spares been provided as per Rule and suitably stored in dry situations YES

Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory YES

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	MAKER.	RATED AT				PRIME MOVER.	
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN	ONE	ITALINA TERMOMERCECINIA	16	110	145	380	STEAM	ITALINA TERMOMERCECINIA
	TWO	DELCO DE G MC	30	11	250	1200	DIESEL	FAIRBANK MORSE
EMERGENCY	-	-	-	-	-	-	-	-
ROTARY TRANSFORMER	-	-	-	-	-	-	-	-

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
		No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ... STEAM	16	1	95 1/2	145	256	140	VC	L+A
" " EQUALISER	-	1	1.5 1/2 x .04	-	-	-	"	"
" " DIESEL	30	1	1320 1/0	250	239 (980)	143	"	"
EMERGENCY GENERATOR	-	-	-	-	-	-	-	-
ROTARY TRANSFORMER: MOTOR	-	-	-	-	-	-	-	-
" " GENERATOR	-	-	-	-	-	-	-	-

MAIN DISTRIBUTION CABLES (to Section Boards, Distribution Fuse Boards, etc.).

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
SHORE CONNECTION	1	95 1/2	30	257	169	VC	L+A
MIDSHIPS	1	50-	50	169	-	"	"
POOP LIGHTS	1	15 1/4	50	81 (67)	-	"	"
FOCLE LIGHTS	1	15 1/4	10	81	-	"	"
NAVIGATION	1	8 1/2	2.5	53	-	"	"
ENGINE ROOM POWER	1	35-	6	134	-	"	"
REFRIGERATORS	1	60-	40	191	-	"	"
RADIO	1	20-	40	92	-	"	"

LIGHTING, HEATING, WIRELESS, NAVIGATION LIGHTS, ETC., CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
FATHOMETER	2	.0080	30	60	60	VC	⊗
BATTERY CHARGING	1	1.5 1/2 (12)	15	9.5 (12)	143	VC	L+A
ACCOMMODATION LIGHTS	1	2"	50	10	-	"	"
ENGINE ROOM LIGHTS	1	2 1/4"	50	10 (81)	-	"	"
SEARCHLIGHT (BRIDGE)	1	40"	10	143	-	"	"
NAVIGATION LIGHTS	1	2	.95	10	-	"	"
RADIO	1	15 (20)	50	81 (92)	-	"	"
POOP DECK	1	2	50	10	- as affrd.	"	"

⊗ flexible conduit covered with copper braid shell plating to transmitter & receiver

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
REFRIG COMPRESSOR	1	3.0	1	60 1/2	24	191	VC	L+A	
"	1	2.0	1	60 1/2	16.2	191	"	"	
FUEL OIL TRANSFER	1	2.0	1	10"	10	63	"	"	
TURNING MOTOR	1	10.0	1	35-	73	134	"	"	
FRESHWATER PUMP	1	.75	1	16"	62	84	"	"	
FUEL OIL PURIFIER	1	2.0	1	35-	16.6	134	"	"	
LUB OIL PURIFIER	1	1.5	1	35-	14	134	"	"	
SANITARY PUMP	1	7.5	1	60-	58	191	"	"	
WORKSHOP	1	.75	1	16-	33	84	"	"	

The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.  
All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.  
The foregoing is a correct description.

..... Electrical Contractors. Date..... ✓

**COMPASSES.**

Have the compasses been adjusted under working conditions..... YES

..... Builder's Signature. Date..... ✓

Have the foregoing descriptions and schedules been verified and found correct..... YES AS FAR AS POSSIBLE

Is this installation a duplicate of a previous case..... ✓ If so, state name of vessel..... ✓

Plans. Are approved plans forwarded herewith..... YES If not, state date of approval..... ✓

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith..... No

General Remarks. (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.)

The electrical installation to the requirements of the Registro Italiano have been in operation since 1938. The plans available have been examined & found to be generally in accordance with installation

The dimensions in this Report have been checked with the approved plans as far as possible & found correct. The materials & workmanship are good and the installation has been examined under working conditions & found to be satisfactory.

The builders installed main switchboard had been replaced by board made by Gumbull Electric Division of G.E.C. plan A 3885-1 attached

In my opinion the electrical installation is such as could be accepted by the Committee for Classification

Noted by  
10/12/53

Total Capacity of Generators..... 76. v Kilowatts.

The amount of Fee ... £ 125 00 : When applied for, Aug 15 1953

Travelling Expenses (if any) £ : : When received, 19

Bloomfield  
- Surveyor to Lloyd's Register of Shipping.

Committee's Minute..... NEW YORK NOV 10 1953

Assigned..... Elec. light.

2m. 9.46. - Transf. (The Surveyors are requested not to write on or below the space for Committee's Minute.)