

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

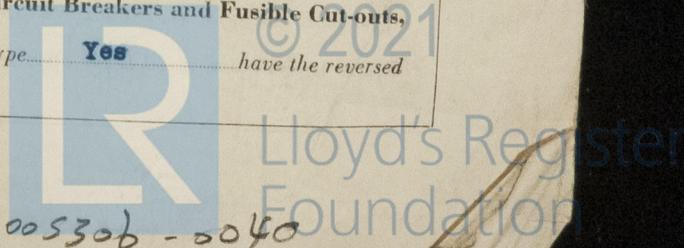
27 FEB 1945

Received at London Office

Writing Report... 20th Jan. 19 45 When handed in at Local Office... 30th Jan. 19 45 Port of **Baltimore, Maryland**  
 in Survey held at **Baltimore, Maryland** Date, First Survey... 25th Aug. Last Survey... 14th Dec. 19 44  
 Book. (Number of Visits... 4 )  
 on the **Motor Tanker "POZA RICA"** Tons { Gross 7599 Net - - }  
 at **Genoa - Sestri** By whom built **Soc. Anon Ansaldo** Yard No. - When built **1940**  
 rs **Garibaldi S.A.C.N.** Port belonging to -  
 tric Light Installation fitted by - Contract No. - When fitted **1940**  
 Vessel fitted for carrying Petroleum in bulk **Yes**

be made

1 and over of Distribution **2 - Wire**  
 ure of supply for Lighting **110** volts, Heating **110** volts, Power **110** volts.  
 t or Alternating Current, Lighting **Direct** Power **Direct**  
 rrating current system, state frequency of periods per second -  
 ve Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off **Yes**  
 rators, do they comply with the requirements regarding temperature rise - , are they compound wound **Yes**  
 ry over compounded 5 per cent. - , if not compound wound state distance between each generator -  
 y more than one generator is fitted are they arranged to run in parallel **Yes** , is an adjustable regulating resistance fitted in  
 with each shunt field **Yes** Have certificates of test results for machines under 100 kw. been submitted and  
 ved - Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing -  
 l terminals accessible, clearly marked, and furnished with sockets **Yes** , are they so spaced or shielded that they cannot be accidentally earthed,  
 ircuit, or touched **Yes** Are the lubricating arrangements of the generators as per Rule **Yes**  
 on of Generators **Tween deck at After end of E. R.** , is the ventilation  
 of the generators satisfactory **Yes** are they clear of all inflammable material **Yes** if situated near unprotected  
 ork or other combustible material, state distance of same horizontally from or vertically above the generators - and -  
 generators protected from mechanical injury and damage from water, steam or oil **Yes** , are their axes of rotation fore and aft **Yes**  
 ing, are the bedplates and frames of the generating plant efficiently earthed **Yes** are the prime movers and their respective generators  
 illic contact **Yes** Main Switch Boards, where placed **on After Bulkhead of Generator**  
**Flat** If the generators and main switchboard are not placed in the same compartment, is each generator provided with  
 n each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard -  
 boards, are they placed in accessible positions, free from inflammable gases and acid fumes **Yes** , are they protected from mechanical  
 and damage from water, steam or oil **Yes** , if situated near unprotected woodwork or other combustible material, state distance of same  
 tally from or vertically above the switchboards - and - , are they constructed wholly of durable, non-ignitable non-absorbent  
 ils **Yes** , is all insulation of high dielectric strength and of permanently high insulation resistance **Yes**  
 an approved type **Steel with mica bushes** , if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micanite or other  
 gnosopic insulating material, and the slab similarly insulated from its framework - , is the non-hygroscopic insulating material of an approved  
 , and is the frame effectively earthed **Yes** Are the fittings as per Rule regarding:—spacing or shielding of live parts  
 es , accessibility of all parts **Yes** , absence of fuses on back of board **Yes** , temperature rise of  
 s bars - , individual fuses to voltmeter, pilot or earth lamp **Yes** , are moving parts of switches alive in the  
 osition **No** are all screws and nuts securing connections effectively locked **Yes** are any fuses fitted on the live side of  
**No** Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches  
**Generator has a 2 pole circuit breaker with an incorporated knife switch to the equalising bus. Outgoing circuit has a two pole switch, except steering gear which has a 2 pole circuit breaker.**  
 ine driven generators fitted with emergency trip switch as per rule **Yes** Are cupboards or compartments containing switchboards composed of  
 sting material or lined with approved material **Yes** Instruments on main switchboard **2** ammeters **2** volt-  
 - synchronising device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection  
**Yes** Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system  
**Ohmmeter** Switches, Circuit Breakers and Fusible Cut-outs,  
 comply with the requirements of the Rules **Yes** are the fusible cutouts of an approved type **Yes** have the reversed



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current protection devices been tested under working conditions **Yes** Joint Boxes, Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule **Yes**

Cables: Single, twin, concentric, or multicore **Single** are the cables insulated and protected as per Tables IV, V, X or XI of the Rules **Yes**

If the cables are insulated otherwise than as per Rule, are they of an approved type **-** Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load **-** Cable Sockets, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets **Yes** Paper Insulated and Varnished Cambric Insulated Cables.

If conductors are paper or varnished cambric insulated, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound **-** or waterproof insulating tape **Yes** Cable Runs, are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage **Yes** Are cables in machinery spaces, galleys, laundries, bathrooms and lavatories lead covered or run in conduit **lead covered**

Support and Protection of Cables, state how the cables are supported and protected **saddles spaced 8" apart, lead covered and armoured, in steel casing along fire and after gangway**

If cables are run in wood casings, are the casings and caps secured by screws **-** are the cap screws of brass **-** are the cables run in separate grooves **-** If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII **Yes**

Refrigerated Chambers, are the cables and fittings in accordance with the special requirements **Yes**

Joints in Cables, state if any, and how made, insulated, and protected **None**

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands **Yes** Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed **Yes** state the material of which the bushes are made **lead**

Earthing Connections, state what earthing connections are fitted and their respective sectional areas **connection made at each section board**

are their connections made as per Rule **Yes**

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule **Yes** Emergency Supply, state position and method of control of the emergency supply and how the generator is driven **on main deck in separate room aft of E. R. casing, double throw double poile knife switch on emergency switchboard, 2 cylinder Diesel engine**

Navigation Lamps, are these separately wired **Yes**, controlled by separate switch and separate fuses **Yes**, are the fuses double pole **Yes** are the switches and fuses grouped in a position accessible only to the officers on watch **Yes**

has each navigation lamp an automatic indicator as per Rule **Yes** Secondary Batteries, are they constructed and fitted as per Rule **Yes**

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight **Yes** are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected **-**

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected **none fitted** how are the cables led **-**

where are the controlling switches situated **-**

are all fittings suitably ventilated **-**, are all switches and lampholders constructed wholly of non-ignitable, non-absorbent materials **Yes**

Heating and Cooking Appliances, are they constructed and fitted as per Rule **Yes**, are air heaters constructed and fitted as per Rule **-**

Searchlight Lamps, No. of **-**, whether fixed or portable **-**, are their fittings as per Rule **-**

Arc Lamps, other than searchlight lamps, No. **none**, are their live parts insulated from the frame or case **-**, are their fittings as per Rule **-**

Motors, are their working parts readily accessible **Yes**, are the coils self-contained and readily removable for replacement **Yes** are the brushes, brush holders, terminals and lubricating arrangements as per Rule **Yes**, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material **Yes**, are they protected from mechanical injury and damage from water, steam or oil **Yes** are their axes of rotation fore and aft **-**, if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type **Yes** if not of this type, state distance of the combustible material horizontally or vertically above the motors **-** and **-**

have machines of over 100 BHP been inspected by the Surveyors during manufacture and testing **-** Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule **Yes** Lightning Conductors, where lightning conductors are required, are these fitted as per Rule **-** Ships carrying Oil having a Flash Point less than 150°F. Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings **Yes** are all fuses of the filled cartridge type **Yes** are they of an approved type **Yes**

If portable lamps for use in dangerous spaces are supplied, are they of a self-contained, battery-fed type approved by the Home Office **-**

Spare Gear, if the vessel is for open sea service have spares been supplied as per Rule **Yes**

PARTICULARS OF GENERATING PLANT.									
DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.		
		Kilowatts.	Volts.	Amperes.	Rev. per Min.		Fuel Used.	Flash Point of Fuel.	
MAIN	2	50	110	455	400	Heavy Oil Engine	Diesel	above 150° F	
AUXILIARY									
EMERGENCY	1	10	110	91	750	Heavy oil Engine	Diesel	above 150° F	
ROTARY TRANSFORMER									

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length (Lead and Return.) Feet.	Insulated with	HOW PROTECTED
	No. per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	Circuit.	Rate.			
MAIN GENERATOR	2	.62			600	770	50	Var. Camb.	Lead covered & Armoured
EQUALISER CONNECTIONS	1	.31							
AUXILIARY GENERATOR									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER MOTOR GENERATOR									
ENGINE ROOM	1	.010075			20	42		" "	" " " "
Starboard	1	.010075			20	42		" "	" " " "
AUXILIARY SWITCHBOARDS									
E R - Power	1	.062			100	135		" "	" " " "
Vent Fans Deck	1	.31			200	395		" "	" " " "
E.R. Workshop	1	.010075			40	42		" "	" " " "
Emerg. Panel	1	.0775			100	775		" "	" " " "
ACCOMMODATION									
Poop Port	1	.010075			40	42		" "	" " " "
Poop Starboard	1	.010075			40	42		" "	" " " "
Fore & Centre Castles	1	.062	18	.058	100	135		" "	" " " "
WIRELESS TELEGRAPH	1	.02325			40	75		" "	" " " "
Dom. Merrig.	1	.0031			20			" "	" " " "
NAV. LIGHTS	1	.062			100	135		" "	" " " "
Centre Castle Refrig.	1	.0031			20			" "	" " " "
Emergency Panel	1	.0775			100			" "	" " " "
Deck LIGHTS	1	.0465			100			" "	" " " "
ARC LAMPS					40			" "	" " " "
HEATERS									

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length (Lead and Return.) Feet.	Insulated with	HOW PROTECTED
		No. per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	In Circuit	Rate.			
Workshop Grinder	1	1	.0031							
Dom. Refrig. Comp.	1	1	.02325			54	75		Var. Camb.	Lead covered & Armoured
Brine PUMP	1	1	.010075			13	42		" "	" " " "
Sanitary PUMP	1	1	.0031			7.1			" "	" " " "
Refrig. Circ. PUMP	1	1	.0031			6.9			" "	" " " "
Midship Refrig. Circ. PUMP	1	1	.010075			23	42		" "	" " " "
Fresh Water pump	1	1	.0031			7.1			" "	" " " "
Centre castle Refrig. Comp	1	1	.0465			70	104		" "	" " " "
Centre castle Refrig. Brine	1	1	.010075			21.5	42		" "	" " " "
ENGINE TURNING GEAR	1	1	.0465			60	104		" "	" " " "
F.O. Purifier	1	1	.0031			22			" "	" " " "
L.O. purifier	1	1	.0031			22			" "	" " " "
Drilling Machine	1	1	.010075			12.9	42		" "	" " " "
Laths	1	1	.0031			8.6			" "	" " " "
Bread Mixer	1	1	.0031			8.0			" "	" " " "
Bread Oven	1	1	.010075			35	42		" "	" " " "
Galley F. O. Heater	1	1	.0031			9			" "	" " " "
Steering Gear Motor	1	1	.02325			40	75		" "	" " " "
Vent Fans E.R.	1	1	.010075			29.5	42		" "	" " " "
Vent Fans E.R. (a)	1	1	.010075			29.5	42		" "	" " " "
Vent Fans Poop Accom. (b)	1	1	.010075			21			" "	" " " "
Vent Fans Poop Accom.	1	1	.010075			21			" "	" " " "
Vent Fans	1	1	.010075			21			" "	" " " "
Vent Fans Poop Accom.	1	1	.010075			21			" "	" " " "
" " Midship Accom.	1	1	.010075			31			" "	" " " "
" " Bridge	1	1	.010075			14			" "	" " " "
" " Galley	1	1	.0031			14			" "	" " " "

All Conductors are of annealed copper conforming to British Standard Specification No. 7 (or International Electro-technical Commission Publication No. 28).

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

Electrical Engineers.

Date

COMPASSES.

Distance between electric generators or motors and standard compass Clear view screen motor 15 ft.

Distance between electric generators or motors and steering compass " " " " 7 ft.

The nearest cables to the compasses are as follows:—

A cable carrying .8 Ampères 1 feet from standard compass 1 feet from steering compass.

A cable carrying 1.2 Ampères 9 feet from standard compass 2 feet from steering compass.

A cable carrying .8 Ampères 11 feet from standard compass 4 feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power Yes

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted

The maximum deviation due to electric currents was found to be - degrees on - course in the case of the standard compass, and - degrees on - course in the case of the steering compass.

Builder's Signature.

Date

Is this installation a duplicate of a previous case No If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. The electric installation of this vessel)  
now examined and tested, found in good order.

Sectional switchboards now renewed in synthetic insulating material to replace the steel switchboards with mica bushings, several of which were burnt by shorts. The generators examined under full working conditions, the reverse current and overload devices operated and found in good order. In my opinion the electrical installation of this vessel is in good and safe working condition and meet the special requirements for ships carrying oil having a flash point less than 150°.

Total Capacity of Generators 110 Kilowatts.

The amount of Fee ... £ \$180.00 Jan. 30, 1945

Travelling Expenses (if any) £ : - : When received. 19

Committee's Minute NEW YORK FEB 7 1945

Assigned Elec. light

Wm. C. Cowan  
Surveyor to Lloyd's Register of Shipping.

1m-4-42—Transfer, Printed in U.S.A.  
(The Surveyors are requested not to write on or below the space for Committee's Minute)



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