

Rpt. 13.

No. 4442

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

11 JUN 1935

Date of writing Report 21st April 1935 When handed in at Local Office 15th May 1935 Port of New Orleans.

No. in Survey held at New Orleans Date, First Survey 18th Feb. Last Survey 15th April 1935
Reg. Book. (Number of Visits.....)

71923 on the SS "Atlantida"

Tons { Gross 4191
Net 2476.

Built at Belfast By whom built Forbman Clark & Co. Ltd Yard No. ✓ When built 1924

Owners Standard Rev. Corp. Port belonging to Geiba

Electric Light Installation fitted by Martine Elec. Co. Inc. Contract No. ✓ When fitted 1935

Is the Vessel fitted for carrying Petroleum in bulk No.

System of Distribution Direct Current 110 volt 2 wire system ✓

Pressure of supply for Lighting 110 ✓ volts, Heating None volts, Power 110 ✓ volts.

Direct or Alternating Current, Lighting Direct ✓ Power Direct Current ✓

If alternating current system, state frequency of periods per second None

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off yes ✓

Generators, do they comply with the requirements regarding temperature rise yes ✓, are they compound wound yes ✓
are they over compounded 5 per cent. yes ✓, if not compound wound state distance between each generator

Where more than one generator is fitted are they arranged to run in parallel yes ✓, is an adjustable regulating resistance fitted in series with each shunt field yes ✓
Have certificates of test results for machines under 100 kw. been submitted and approved ✓

Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing ✓
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 ✓

Position of Generators Port side of vessel fore & aft (after hold) ✓, is the ventilation in way of the generators satisfactory yes ✓ are they clear of all inflammable material yes ✓ if situated near unprotected

woodwork or other combustible material, state distance of same horizontally from or vertically above the generators _____ and _____
are the generators protected from mechanical injury and damage from water, steam or oil yes ✓, are their axes of rotation fore and aft yes ✓

Earthing, are the bedplates and frames of the generating plant efficiently earthed yes ✓ are the prime movers and their respective generators in metallic contact yes ✓

Main Switch Boards, where placed Starboard side of ship ✓
near generator. ✓ If the generators and main switchboard are not placed in the same compartment, is each generator provided with a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard yes ✓

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes yes ✓, are they protected from mechanical injury and damage from water, steam or oil yes ✓, if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards _____ and _____, are they constructed wholly of durable, non-ignitable non-absorbent materials yes ✓, is all insulation of high dielectric strength and of permanently high insulation resistance yes ✓, is it of an approved type yes ✓, if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework yes ✓, is the non-hygroscopic insulating material of an approved type yes ✓, and is the frame effectively earthed yes ✓. Are the fittings as per Rule regarding:— spacing or shielding of live parts yes ✓, accessibility of all parts yes ✓, absence of fuses on back of board yes ✓, temperature rise of omnibus bars _____, individual fuses to voltmeter, pilot or earth lamp yes ✓, are moving parts of switches alive in the "off" position yes ✓, are all screws and nuts securing connections effectively locked yes ✓, are any fuses fitted on the live side of switches yes ✓

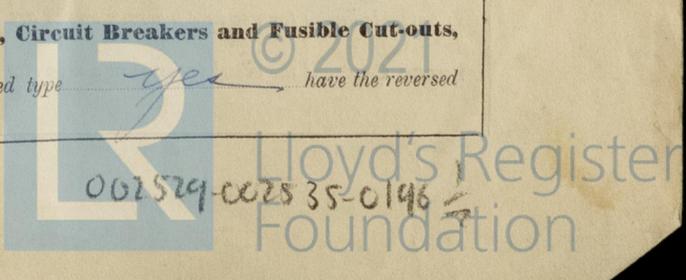
Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches Automatic circuit breakers ✓

Are turbine driven generators fitted with emergency trip switch as per rule ✓ Are cupboards or compartments containing switchboards composed of fire-resisting material or lined with approved material yes ✓ Instruments on main switchboard 2 ammeters 2

voltmeters 2 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 Ground lamps ✓

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules yes ✓ are the fusible cutouts of an approved type yes ✓ have the reversed _____



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 yes **Fall of Pressure**, state maximum between bus bars and any point of the installation under maximum load 2 volts **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 yes, 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 conduit

Support and Protection of Cables, state how the cables are supported and protected conduit

If cables are run in wood casings, are the casings and caps secured by screws conduit, are the cap screws of brass yes, are the cables run in separate grooves yes. 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 Process question, soldered compound

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 fibre + lead

Earthing Connections, state what earthing connections are fitted and their respective sectional areas No. 6 W.B.G. 7 strands. 192 dian, are their connections made as per Rule

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 steam

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 Not

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected No, how are the cables led

where are the controlling switches situated Engine Room

are all fittings suitably ventilated yes, 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 yes

Searchlight Lamps, No. of 1, whether fixed or portable fixed, are their fittings as per Rule yes

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

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 yes, 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 yes **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 yes **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 fitted 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.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ...	2	75	110	600	320	Steam	(now fitted)	
AUXILIARY ...	2	75	110	600	320	Steam	(already in vessel)	
EMERGENCY ...								
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
MAIN GENERATOR ...	2	1,000,000	61	1.150	650	✓	50	Rubber	Conduit
EQUALISER CONNECTIONS ...	2	500,000	37	.798	400	✓			
AUXILIARY GENERATOR ...	2	1,000,000	61	1.150	650	✓			
EMERGENCY GENERATOR ...		500,000	37	.798	400	✓			
ROTARY TRANSFORMER MOTOR GENERATOR ...									
ENGINE ROOM ...									
BOILER ROOM ...									
AUXILIARY SWITCHBOARDS ...									
ACCOMMODATION ...									
WIRELESS ...	2-10	10,450	7	.120	25	✓	120	Rubber	Conduit
SEARCHLIGHT ...	2-6	2,300	7	.142	50	✓	150		
MASTHEAD LIGHT ...	2-12	653	7	.096	20	✓	150		
SIDE LIGHTS ...	2-12		7	.096	20	✓	30		
COMPASS LIGHTS ...	2-14	4110	7	.075	15	✓	30		
POOP LIGHTS ...	2-14		7	.075	15	✓	40		
CARGO LIGHTS ...	2-12		7	.096	20	✓	150		
ARC LAMPS ...	None								
HEATERS ...	None								

Already in vessel, but part renewed.

MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP ...	None									
MAIN BILGE LINE PUMPS ...	✓									
GENERAL SERVICE PUMP ...	✓									
EMERGENCY BILGE PUMP ...	✓									
SANITARY PUMP ...	✓									
CIRC. SEA WATER PUMPS ...	✓									
CIRC. FRESH WATER PUMPS ...	✓									
AIR COMPRESSOR ...	✓									
FRESH WATER PUMP ...	✓									
ENGINE TURNING GEAR ...	✓									
ENGINE REVERSING GEAR ...	✓									
LUBRICATING OIL PUMPS ...	✓									
OIL FUEL TRANSFER PUMP ...	✓									
WINDLASS ...	✓									
WINCHES, FORWARD ...	✓									
WINCHES, AFT ...	✓									
STEERING GEAR—	None									
(a) MOTOR GENERATOR ...	✓									
(b) MAIN MOTOR ...	✓									
WORKSHOP MOTOR ...	✓									
VENTILATING FANS ...	4	10 H.P. #27	306	2	150	do	do	do		
Chill water Pumps	2	10 HP. #27	306	2	150	do	do	do		
Circulating pumps	3	7 1/2 HP.	253	2	50	do	do	do		
Condensate pumps	2	1 HP.	075	2	50	do	do	do		

All of these auxiliaries are steam driven already in vessel.

new motors

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.

Maritime Electric Co Inc Electrical Engineers. Date *May 17/35*
Henry Maxwell Pres-

COMPASSES.

Distance between electric generators or motors and standard compass

Distance between electric generators or motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying Amperes feet from standard compass feet from steering compass.

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A cable carrying Amperes feet from standard compass feet from steering compass.

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

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 *Yes*. If so, state name of vessel *"Amapala," "Granada"*

General Remarks (State quality of workmanship, opinions as to class, &c. *except for the number of fans in holds*)
The workmanship and materials, used in this installation, are all first class, and are fitted in conjunction with the Refrigerating Machinery now installed and recommended for the Committee's approval.

Noted
13/6/35

Total Capacity of Generators *150 kil - (new)*
300 Kilowatts.

The amount of Fee £	:	:	When applied for,	19
Travelling Expenses (if any) £	:	:	When received,	19

AW Murray
Surveyor to Lloyd's Register of Shipping.

Committee's Minute *NEW YORK MAY 29 1935*

Assigned *See Report 17 (RMC)* (as now)

File in Box



2015.84. - Transfer. The Surveys are requested not to write on or below the space for Committee's Minute