

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

DEC 22 1937

Date of writing Report 30th Nov 37 When handed in at Local Office 30th Nov 1937 Port of GALVESTON.

No. in Survey held at BEAUMONT, TEXAS. Date, First Survey 24/9/37 Last Survey 6/10/1937
Reg. Book. 1389 on the Steel Tanker Oil Barge "EL CARIBE" (Number of 3) Tons { Gross 298
Net 141

Built at Bath Me. By whom built Lescal P.P. Co. Yard No. 125 When built 1917.

Owners The Lescal Company. Port belonging to Wilmington, Del.
Electric Light Installation fitted by Lescal P.P. Co. Contract No. 1917 When fitted 1924.

Is the Vessel fitted for carrying Petroleum in bulk Yes

System of Distribution Twice one - 10KW.
one - 7.5KW.
Pressure of supply for Lighting 115. volts, Heating 120/125V. volts, Power

Direct or Alternating Current, Lighting Direct Power Direct.

Is 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
Do they over compound 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 No, 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 Yes Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing 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

Position of Generators 1-7.5KW - lower engine room, 1-10 KW - upper part of Eng. Rm., is the ventilation
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 none adjacent

Are the generators protected from mechanical injury and damage from water, steam or oil Yes, are their axes of rotation fore and aft Yes
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 Lower part of engine room.

If the generators and main switchboards 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

Are 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 none adjacent, 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

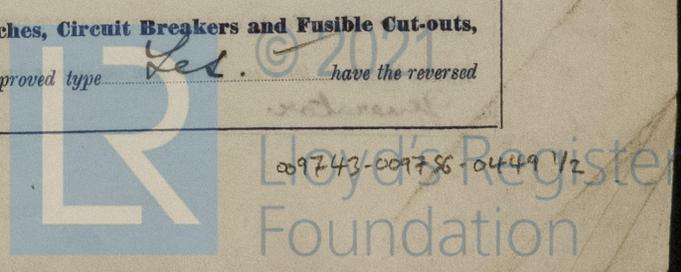
Is the insulation of an approved type Yes, if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micanite or other
non-hygroscopic insulating material, and the slab similarly insulated from its framework Yes, is the non-hygroscopic insulating material of an 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
bus bars none, individual fuses to voltmeter, pilot or earth lamp Yes, are moving parts of switches alive in the
open position No are all screws and nuts securing connections effectively locked Yes are any fuses fitted on the live side of
switches No

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches
and equalizer switches Linked double pole multipole-way switch
1-7.5KW - lower engine room, 1-10 KW - upper part of Eng. Rm.
Are cupboards or compartments containing switchboards composed of
resisting material or lined with approved material metallic Instruments on main switchboard 3 ammeters 2

Are there any synchronising devices for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection
No

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system
Pilot indicator 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

construction, protection, insulation, material, and position of these as per rule Yes

Cables: Single, twin, concentric, or multicore Twin 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 Yes

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, lavatories, bathrooms and lavatories lead covered or run in conduit Conduits with clamps

Support and Protection of Cables, state how the cables are supported and protected In conduit, efficiently clamped & supported

If cables are run in wood casings, are the casings and caps secured by screws None, 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 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 Yes

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 Yes

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 no **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 None to placed

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 to placed

how are the cables led Yes

where are the controlling switches situated Yes

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 None, whether fixed or portable Yes, are their fittings as per Rule Yes

Arc Lamps, other than searchlight lamps, No. of Yes, are their live parts insulated from the frame or case Yes, are their fittings as per Rule Yes

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 None adjacent, if not of this type, state distance of the combustible material horizontally or vertically above the motors Yes and Yes

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 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 Yes

Spare Gear, if the vessel is for open sea service have spares been supplied as per Rule Yes, also spare motor for Y.S.K.W Generator 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 ...	One (1)	10	125	80	1,200	Diesel.	Diesel	Above 150°F.
AUXILIARY ...	One (1)	7.5	120	62.5	1,200	Winton 6 cyl. oil engine.	Gas oil	" "
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.	No.	Mils. Diameter.	Circuit.	Bale.			
MAIN GENERATOR ...	1	66373	7	994	80	✓	40	Rub. Cov. 156 Bra. Lead Proof Braided	Conduits
EQUALISER CONNECTIONS ...									
AUXILIARY GENERATOR ...	1	41400	7	772	62.5	✓	40	"	"
EMERGENCY GENERATOR ...									
ROTARY TRANSFORMER MOTOR GENERATOR ...									
ENGINE ROOM ...	1	4110	7	242	8	✓	100	"	"
BOILER ROOM ...									
AUXILIARY SWITCHBOARDS ...	1	26300	7	612	20	✓	90	"	"
ACCOMMODATION ...									
WIRELESS ...									
SEARCHLIGHT ...									
MASTHEAD LIGHT ...	(2)	1	6536	7	30.5	5	✓	80	Lead Covered in Conduits
SIDE LIGHTS ...	(2)	1	"	"	"	5	✓	90	"
COMPASS LIGHTS ...									
POOP LIGHTS ...	(2)	1	"	"	"	5	✓	70	"
CARGO LIGHTS ...									
ARC LAMPS ...									
HEATERS ...									

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.	No.	Mils. Diameter.	In Circuit.	Bale.			
Life & Bilge										
BALLAST PUMP ... 5HP	one	1	26300	7	612	38	✓		Rub. Cov. 156 Bra. Lead Proof Braided	Conduits
MAIN BILGE LINE PUMPS ...										
GENERAL SERVICE PUMP 1HP	"	1	4110	7	242	9	✓		"	"
EMERGENCY BILGE PUMP 1HP	"	1	4110	7	242	9	✓		"	"
SANITARY PUMP ...										
CIRC. SEA WATER PUMPS ...										
CIRC. FRESH WATER PUMPS ...										
AIR COMPRESSOR 6.5HP	"	1	26300	7	612	45 1/2	✓		"	"
FRESH WATER PUMP 1/2HP	"	1	4110	7	242	5	✓		"	"
ENGINE TURNING GEAR ...										
ENGINE REVERSING GEAR ...										
LUBRICATING OIL PUMPS ...										
OIL FUEL TRANSFER PUMP ...										
WINDLASS ... 5HP	"	1	26300	7	612	38	✓		"	"
WINCHES, FORWARD ...										
WINCHES, AFT ...										
STEERING GEAR—										
(a) MOTOR GENERATOR ...										
(b) MAIN MOTOR ...										
WORKSHOP MOTOR ...										
VENTILATING FANS ...										

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. *All cables comply with A.I.F.E Standard Marine Specification which adequately covers the Societies Requirements*

Electrical Engineers.

Date

COMPASSES.

Distance between electric generators or motors and standard compass *65 ft.*

Distance between electric generators or motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying *38* Amperes *30* feet from standard compass feet from steering compass.

A cable carrying *5* Amperes *12* feet from standard compass feet from steering compass.

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 *no*.

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted *no*.

The maximum deviation due to electric currents was found to be *no* 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 If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, etc.)

The above installation is in accordance with the Societies Rules. The workmanship and materials are good. Installation tested under full working conditions and intermediate loads and found satisfactory.

In my opinion the installation is eligible to be classed

Noted

J.Y.

5/1/38

Total Capacity of Generators *14.5* Kilowatts.

The amount of Fee £	:	:	When applied for,
			<i>WR</i> 19
Travelling Expenses (if any) £	:	:	When received,
			19

Wm Rennie

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

NEW YORK DEC 8 1937

Assigned *Elec. light*

2m. 584.—Transfer. The Surveyors are requested not to write on or below the space for Committee's Minute.



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