

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 24th Nov. 1941 When handed in at Local Office 24th Nov. 1941 Port of MOBILE, ALABAMA
 No. in Survey held at MOBILE Date, First Survey 10th March Last Survey 2nd April 1941
 Reg. Book. (Number of Visits 10)
 on the M. V. "PHILAE" ex "TRENTO" Tons { Gross 4403
 Net 3245
 Built at Pascagoula, Miss. By whom built International Yard No. 2 When built 1920
 Completed 1941
 Owners Frango Corporation Port belonging to Panama City, R.P.
 Electric Light Installation fitted by Alabama D.D. & S.B. Company Contract No. - When fitted 1941
 Is the Vessel fitted for carrying Petroleum in bulk no

System of Distribution 2 wire 110-220 throughout vessel, 3 wire generator to switchboard.
 Pressure of supply for Lighting 110 volts, Heating - volts, Power 220 volts.
 Direct or Alternating Current, Lighting Direct Power Direct
 If alternating current system, state frequency of periods per second -
 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 none
 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 -
 Position of Generators Fore and aft on Starboard Lower Engine Room, 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 drip proof 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 Lower Engine Room Starboard
 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 in same compartment.
 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 -, 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 fuses on front, temperature rise of omnibus bars yes, individual fuses to voltmeter, pilot or earth lamp yes, are moving parts of switches alive in the "off" 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 5 pole circuit breakers with overload & reverse current trips with equalizer bus between 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 - Instruments on main switchboard 3 ammeters 2
 voltmeters none 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 yes
 Ammeter in neutral. yes Switches, Circuit Breakers and Fusible Cut-outs, yes have the reversed do these comply with the requirements of the Rules yes are the fusible cutouts of an approved type yes

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 yes 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 3% 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 lead & armored

Support and Protection of Cables, state how the cables are supported and protected run along decks & bulkhead supported by hangers and straps or in WT conduit under Engine Room floor.

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 armored 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 any joints in cables are made in joint box, soldered and taped.

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 steel nipples with bushings each end

Earthing Connections, state what earthing connections are fitted and their respective sectional areas not used.

-, 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 5 KW, 120 volt generator, Diesel driven located above water line on port upper Engine Room platform & connects to lighting panel of main switchboard through double throw switch.

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 -

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

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 -

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 -, are air heaters constructed and fitted as per Rule -

Searchlight Lamps, No. of none, whether fixed or portable -, are their fittings as per Rule -

Arc Lamps, other than searchlight lamps, No. of 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 drip proof cover 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 drip proof

-, 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 none 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 Freighter are all fuses of the fitted cartridge type - are they of an approved type -

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	60	120-240	240		Diesel Engine	Diesel	150° F.	
AUXILIARY ...						"	"		
EMERGENCY ...	1	5	120	40					
ROTARY TRANSFORMER									

GENERATOR, LIGHTING AND HEATING CONDUCTORS.									
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.	Rule.			
MAIN GENERATOR ...	1	0.3922	37	.116	240	327 3/8	60	VC	Lead & armored
EQUALISER CONNECTIONS ...		0.3922	37	.116	240	327 3/8	60	VC	"
AUXILIARY GENERATOR...									
EMERGENCY GENERATOR ...	1	0.0206	7	.061	40	46.5 7/8	90	VC	"
ROTARY TRANSFORMER } MOTOR GENERATOR...									
ENGINE ROOM...									
BOILER ROOM...									
AUXILIARY SWITCHBOARDS ...									
Engine Room	1	0.0206	7	.061	40	46.5 7/8	20	VC	"
Forecastle	1	0.0130	7	.048	20	34.5 4/8	360	VC	"
Midship	1	0.0206	7	.061	42	46.5 7/8	200	VC	"
Aft Qts. Lower	1	0.0206	7	.061	30	46.5 7/8	150	VC	"
Aft.Qts. Upper	1	0.0206	7	.061	30	46.5 7/8	180	VC	"
ACCOMMODATION ...									
Running Light	1	0.0082	7	.038	5	25.5	350	VC	"
WIRELESS ...	1	0.0206	7	.061	30	46.5 7/8	200	VC	"
SEARCHLIGHT ...	-								
MASTHEAD LIGHT ...	1	0.0051	7	.030	1/2	18.5	500	VC	"
SIDE LIGHTS ...	1	0.0051	7	.030	1/2	18.5	100	VC	"
COMPASS LIGHTS ...	1	0.0051	7	.030	1/2	18.5	30	VC	"
POOP LIGHTS ...	1	0.0051	7	.030	10	18.5	250	VC	"
CARGO LIGHTS ...	1	0.0051	7	.030	2	18.5	250	VC	"
ARC LAMPS ...									
HEATERS ...									

MOTOR CONDUCTORS.										
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.	Rule.			
BALLAST PUMP ...	1	1	.0829	19	.074	93	113 1/8	140	VC	Lead & armored
MAIN BILGE LINE PUMPS ...										
GENERAL SERVICE PUMP ...	1	1	.0521	7	.097	374	83	140	VC	"
EMERGENCY BILGE PUMP ...										
SANITARY PUMP ...										
CIRC. SEA WATER PUMPS ...	1	1	.0829	19	.074	73	113 1/8	120	VC	"
CIRC. FRESH WATER PUMPS...										
AIR COMPRESSOR ...	1	1	.0829	19	.074	74	113 1/8	130	VC	"
FRESH WATER PUMP ...										
ENGINE TURNING GEAR...	2	1	.0051	7	.030	8	18.5	60	VC	"
ENGINE REVERSING GEAR ...										
LUBRICATING OIL PUMPS ...	1	1	.0829	19	.074	73	113 1/8	150	VC	"
OIL FUEL TRANSFER PUMP...	2	1	.0051	7	.030	12	18.5	80	VC	"
WINDLASS ...			steam							
WINCHES, FORWARD ...			steam							
WINCHES, AFT ...			steam							
STEERING GEAR—										
(a) MOTOR GENERATOR...			steam							
(b) MAIN MOTOR ...										
WORKSHOP MOTOR ...	2	1	0.0051	7	.030	7.7	18.5	40	VC	"
VENTILATING FANS ...										
Lube Oil Centrifuge	1	1	0.0051	7	.030	12	18.5	150	VC	"
Fuel Oil	1	1	0.0051	7	.030	11.7	18.5	150	VC	"
" " " Pump	2	1	0.0051	7	.030	1	18.5	150	VC	"
Boiler Feed	2	1	0.0206	7	.061	23	46.5	180	VC	"
Circulating Pump	1	1	0.1045	19	.083	10.8	13.3	180	VC	"
Ice Machine	1	1	0.0201	7	.062	19.8	46.5	80	VC	"

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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.

W. D. Szepinski

Electrical Engineers.

Date *December 1st 1941*

COMPASSES.

Distance between electric generators or motors and standard compass about 100 ft.

Distance between electric generators or motors and steering compass about 100 ft.

The nearest cables to the compasses are as follows:—

Binnacle

A cable carrying 1/4 Ampères close to feet from standard compass. close to feet from steering compass.

Navigation

A cable carrying 5 Ampères abt. 10 feet from standard compass. abt. 10 feet from steering compass.

Midship Quarters

A cable carrying 40 Ampères abt. 30 feet from standard compass. abt. 20 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. yes

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

ALABAMA DRY DOCK & SHIPBUILDING Co.

W. D. Szepinski Naval Architect/Builder's Signature.

Date *December 1st 1941*

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 has been fitted on board under Special Survey in accordance with the Rules and approved plans and the workmanship and material are good.

A large number of the motors are old and it was not possible to secure certificates, but they have all been overhauled, meggered, found or made good and satisfactorily tried at full load, and in my opinion they may safely be accepted by the Committee.

The complete installation has been satisfactorily tried at full load and it is now in good and safe working condition and the vessel is eligible in my opinion to receive a character in the Register Book.

Total Capacity of Generators 125 Kilowatts.

The amount of Fee ... \$ 177.00 : When applied for, Dec. 2 19 41

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

J. S. Wood
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned *Elec. light*



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Foundation