

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 4 Jan 38 When handed in at Local Office 6 Jan 38 Port of Philadelphia  
 No. in Survey held at Chester, Pa Date, First Survey July 12 Last Survey Dec 21 1937  
 Reg. Book. SS M.V. RHODE ISLAND (Number of Visits 10)  
 on the SS M.V. RHODE ISLAND Tons { Gross 8562  
 Net 8070  
 Built at Chester, Pa By whom built Sm SB & DD Co Yard No. 165 When built 1937  
 Owners The Texas Co Port belonging to Wilmington Del  
 Electric Light Installation fitted by Sm SB & DD Co Contract No. 165 When fitted 1937  
 Is the Vessel fitted for carrying Petroleum in bulk Yes

## System of Distribution

2 Wire Direct current, ungrounded

## Pressure of supply for Lighting

110

volts, Heating

volts, Power

110

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

Generators, do they comply with the requirements regarding rating

Yes

, are they compound wound

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

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

Are the lubricating arrangements of the generators as per Rule

Yes

## Position of Generators

Put side on engine room flat

is the ventilation in way of the generators satisfactory

Yes

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

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

## Main Switch Boards, where placed

Compartment

Put side on engine room flat near generators in same

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

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

woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards

Not near combustible material

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

with mica or micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework

and is the frame effectively earthed

Yes

Yes

Yes

Yes

Yes

Are the fittings as per Rule regarding:— spacing or shielding of live parts

, accessibility of all parts

Yes

Yes

Yes

, absence of fuses on back of board

Yes

Yes

, proportion of omnibus bars

individual fuses to voltmeter, pilot or earth lamp

Yes

, connections of switches

Yes

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

3 pole switches for line to generator, with blade of switch is equalizer, single pole circuit breaker with overload & reverse current protection.

## Instruments on main switchboard

2

ammeters

2

volts

synchronising device for paralleling purposes.

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

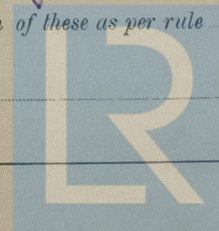
Ground lamps

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules

Yes

Joint Boxes Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule

Yes



Lloyd's Register  
Foundation

011449-011460-0081



**Cables:** Single, twin, concentric, or multicore *Single 9/16 in* are the cables insulated and protected as per Tables IV or V of the Rules *Ays*

**Fall of Pressure,** state maximum between bus bars and any point of the installation under maximum load *3 volts*

**Cable Sockets and other connections,** are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets *Ays*

**Paper Insulated Cables.** If cables are paper covered, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound *Cables are all varnish Cambric insulated*

**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 *Ays*

**Support and Protection of Cables,** state how the cables are supported and protected *supported on steel structure with cable straps & protected by strap iron where necessary*

If cables are run in wood casings, are the casings and caps secured by screws *long run* are the cap screws of brass *Ays* 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 *Ays*

**Refrigerated Chambers,** if lights are fitted, are the cables and fittings in accordance with the special requirements *Ays*

**Joints in Cables,** state if any, and how made, insulated, and protected *Made in cast brass watertight junction boxes, soldered & taped*

**Watertight Glands and Deck Tubes,** are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands *Ays*

**Bushes in Beams and Non-watertight Partitions,** where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed *Ays* state the material of which the bushes are made *lead*

**Earthing Connections,** state what earthing connections are fitted and their respective sectional areas *ground lamps only*

are their connections made as per Rule *✓*

**Alternative Lighting,** are the groups of lights in the propelling machinery space arranged as per Rule *Ays*

**Emergency Supply,** state position and method of control of the emergency supply and how the generator is driven *None*

**Navigation Lamps,** are these separately wired *Ays*, controlled by separate switch and separate fuses *Ays*, are the fuses double pole *Ays* are the switches and fuses grouped in a position accessible only to the officers on watch *on tell tale panel in wheel house* *Ays* has each navigation lamp an automatic indicator as per Rule *Ays*

**Secondary Batteries,** are they constructed and fitted as per Rule *None*

**Fittings,** are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight *Ays* 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 *vapour proof fittings* *✓* how are the cables led *lead & armoured cable used*

where are the controlling switches situated *outside of the space*

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

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

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

**Control Gear and Resistances,** are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule *Ays*

**Lightning Conductors,** where lightning conductors are required, are these fitted as per Rule *Ays*

**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 *Ays*

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office *Ays*

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	50	120	417	1800	Steam turbine			
AUXILIARY									
EMERGENCY									
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 Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
MAIN GENERATOR	1	4715	61	99.2	400	460	30	Varnish Cambric	Lead & Armoured
EQUALISER CONNECTIONS	1	"	"	"	"	"	"	"	"
AUXILIARY GENERATOR									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER									
ENGINE ROOM	1	0618	19	66.4	86	141	20	"	"
BOILER ROOM									
AUXILIARY SWITCHBOARDS									
NAVIGATION LIGHTS	1	0082	7	38.5	2.2	38	100	"	"
FORECASTLE	1	"	"	"	18.6	"	700	"	"
FWD PUMP ROOM	1	"	"	"	9.6	"	600	"	"
AFT	1	"	"	"	9.6	"	400	"	"
MIDSHIP QUARTERS	1	0414	"	86.7	83.2	94	100	"	"
ACCOMMODATION									
AFTER QUARTERS UPPER DECK	1	0261	"	68.8	61.2	78	100	"	"
AFTER QUARTERS BOOP DECK	1	0261	"	68.8	41.3	78	150	"	"
WIRELESS	1	0130	"	48.6	38.0	51	450	"	"
SEARCHLIGHT	1	0082	"	38.5	10.0	38	800	"	"
MASTHEAD LIGHT	1	0032	"	24.2	5	11.6	300	"	"
SIDE LIGHTS	1	"	"	"	5	"	100	"	"
COMPASS LIGHTS	1	"	"	"	5	"	20	"	"
POOP LIGHTS									
CARGO LIGHTS									
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 Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
CONDENSER CONDENSATE PUMP	1	1	0206	7	61.2	42.2	68	100	Varnish Cambric	Lead & Armoured
BOILER CIRC. #1	1	1	0082	7	38.5	17.2	38	80	"	"
MAIN ENGINE ROOM PUMP	1	1	0082	7	38.5	17.2	38	150	"	"
GENERAL SERVICE PUMP										
EMERGENCY BILGE PUMP	1	1	0206	7	61.2	42.2	68	80	"	"
SANITARY PUMP										
CIRC. SEA WATER PUMPS										
CIRC. FRESH WATER PUMPS										
AIR COMPRESSOR										
FRESH WATER PUMP	1	1	0082	7	38.5	25	38	60	"	"
ENGINE TURNING GEAR	1	1	1318	19	94.0	224	226	70	"	"
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS										
OIL FUEL TRANSFER PUMP										
WINDLASS										
WINCHES, FORWARD										
PUMP ROOM BLOWER FWD	1	1	0082	7	38.5	132	38	250	"	"
WINCHES, AFT										
PUMP ROOM BLOWER MID	1	1	0082	7	38.5	132	38	200	"	"
STEERING GEAR										
(a) MOTOR GENERATOR										
(b) MAIN MOTOR										
WORKSHOP MOTOR	3	1	0130	7	48.6	43.6	51	100	"	"
VENTILATING FANS	4	1	0032	7	24.2	7.0	11.6	"	"	"
FUEL OIL STARTING	1	1	0082	7	38.5	17.2	38	"	"	"
FORCED DRAFT #1	1	1	0618	19	66.4	78.0	141	"	"	"
" #2	1	1	0658	19	66.4	78.0	141	150	"	"
LUB. OIL PURIFIER #1	1	1	0206	7	61.2	42.2	68	"	"	"
" #2	1	1	"	7	"	"	"	"	"	"
FUEL OIL PURIFIER #1	1	1	"	7	"	"	"	"	"	"
" #2	1	1	"	7	"	"	"	"	"	"



All Conductors are of annealed copper conforming to British Standard Specification No. 7.  
The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.  
The foregoing is a correct description

SUN SHIPBUILDING & DRY DOCK CO.

Robert A. Aig

Electrical Engineers.

Date 5 Jan 1938

#### COMPASSES.

Distance between electric generators or motors and standard compass

200 ft  
290 ft

Distance between electric generators or motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying  $\frac{1}{2}$  Ampères 5 feet from standard compass 4 feet from steering compass.

A cable carrying 10 Ampères 15 feet from standard compass 10 feet from steering compass.

A cable carrying Ampères feet from standard compass 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 degrees on course in the case of the standard

compass, and degrees on course in the case of the steering compass.

SUN SHIPBUILDING & DRY DOCK CO.

Robert A. Aig

Builder's Signature.

Date 5 Jan 1938

Is this installation a duplicate of a previous case

Yes

If so, state name of vessel

LOUISIANA 7314 Phil 1938

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

All precautions have been taken to make this installation as safe as possible. The electric cables are all varnish Cambric insulated, leaded & woven bronze armoured. The cables are all well protected against mechanical injury. All fittings & fixtures are of brass. The installation has been satisfactorily installed on board the vessel, tried out under full power with satisfactory results.

Noted

Red  
11-2-38

Total Capacity of Generators 100 Kilowatts.

The amount of Fee \$ 162.00 : When applied for, 7 Jan 1938

Travelling Expenses (if any) \$ 5.00 : When received, 14 Jan 1938

W. D. Pankham

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

NEW YORK JAN 26 1938

Assigned Elec. light



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