

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

25 FEB 1949

Date of writing Report Nov. 25th 1948 When handed in at Local Office Nov. 25, 1948 Port of Newport News, Va.  
 No. in Survey held at Newport News, Va. Date, First Survey Mar. 4th Last Survey Oct. 29th 1948.  
 Reg. Book. (Number of Visits 25)  
 70060. on the S/S "OAKLEY L. ALEXANDER" (Ex "Laconia Victory") Tons { Gross 7607  
 Net 4551  
 Built at Baltimore. By whom built Bethlehem Fairfield Ship No.            When built 1945.  
 Owners Pocahontas Steamship Co. Port belonging to Wilmington, Del.  
 Electric Light Installation fitted by            Contract No.            When fitted 1945.  
 Is the Vessel fitted for carrying Petroleum in bulk No.

System of Distribution Three wire for lighting feeders, two wire for power and lighting branches.

Pressure of supply for Lighting 120 volts, Heating - volts, Power 240 volts.

Direct or Alternating Current, Lighting Direct current Power Direct current.

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 A.I.E.E. Standards they compound wound stabilised shunt.  
are they over compounded 5 per cent. -, if not compound wound state distance between each generator 4' - 0"

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 by A.B. of Shipping

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 Engine room generator flat - starboard side., 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 not close 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 Engine room generator flat starboard side

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, if situated near unprotected woodwork or other combustible material, state distance of same

horizontally from or vertically above the switchboards not close 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 A.I.E.E. standards, 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

A.I.E.E. standards, accessibility of all parts Yes, absence of fuses on back of board Yes., temperature rise of omnibus bars A.I.E.E. standards 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

Three pole automatic circuit breakers with overload and reverse current trips. Outgoing circuits two and three pole linked circuit breakers.

Are turbine driven generators fitted with emergency trip switch as per rule yes. Are cupboards or compartments containing switchboards composed of fire-resisting material or lined with approved material Yes Instruments on main switchboard 4 ammeters 3

voltmeters - synchronising device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system            Earth lamps.            Switches, Circuit Breakers and Fusible Cut-outs,           

do these comply with the requirements of the Rules A.I.E.E. standards are the fusible cutouts of an approved type A.I.E.E. standards 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 **A.I.E.E. Standards.**

**Cables:** Single, twin, concentric, or multicore **Multi.** are the cables insulated and protected as per Tables IV, V, X or XI of the Rules **A.I.E.E. standards**

If the cables are insulated otherwise than as per Rule, are they of an approved type **A.I.E.E.** **Fall of Pressure**, state maximum between bus bars and any point of the installation under maximum load **5%** **Cable Sockets**, are the ends of all cables having a sectional

area of 0.04 square inch and above provided with soldering sockets **Yes. Solderless 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** **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 **Armoured cable.**

**Support and Protection of Cables**, state how the cables are supported and protected **Armoured cable supported by metal hangers and clips or grouped on steel racks with metal hangers protected by sheet metal guards**

where exposed to risk to mechanical damage. If cables are run in wood casings, are the casings and caps secured by screws **Yes** 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 **A.I.E.E. standards.**

**Refrigerated Chambers**, are the cables and fittings in accordance with the special requirements **A.I.E.E. standards.**

**Joints in Cables**, state if any, and how made, insulated, and protected **No splice joints - all cables terminate in boxes or appliance.**

**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 **All such cables armoured.**

**Earthing Connections**, state what earthing connections are fitted and their respective sectional areas **effectively earthed.**

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 **No emergency generators.**

**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 **Watertight fittings with metal guards.**

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected **Explosion proof fittings in garages for bulldozers on main deck.** ~~XXXXXXXX~~ how are the cables led ~~XXXXXXXXXXXXXXXXXXXX~~ on metal hangers.

where are the controlling switches situated **outside ~~XXXXXX~~ garages,** 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.** **A.I.E.E. Standards.** are air heaters constructed and fitted as per Rule **Yes.**

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

**Arc Lamps**, other than searchlight lamps, No. of **—** 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 **A.I.E.E.** 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 **F. & A. & Vertical** 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 and totally enclosed.**

if not of this type, state distance of the combustible material horizontally or vertically above the motors **Not close and**

have machines of over 100 BHP been inspected by the Surveyors during manufacture and testing by **A.B. of Control Gear and Resistances**, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule **A.I.E.E.** **Lightning Conductors**, where lightning conductors are required, are these fitted as per Rule **A.I.E.E.** **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 **—** are all fuses of the filled 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	300	240/120DC	1250	1200	Steam turbine		
AUXILIARY	—	—	—	—	—	—		
EMERGENCY	—	—	—	—	—	—		
15 M/G. sets	2	0.6	120 A.C.	6.2				

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.	A.I.E.E.			
MAIN GENERATOR	3	0.8235	37	0.0973	1250	1251	80	V.C.	L.C. & Armoured.
Neutral Connections	1	0.1969	37	0.0822	312	333	88	V.C.	" " "
AUXILIARY GENERATOR	—	—	—	—	—	—	—	—	—
EMERGENCY GENERATOR	—	—	—	—	—	—	—	—	—
ENGINE ROOM I.C. MOTOR	1	0.0032	7	0.0242	12.4	11.5	70	Rubber	L.C. & Armoured.
ENGINE ROOM Aux. Panel	1	0.1045	19	0.0837	71.2	158	160	V.C.	" " "
BOILER ROOM Aux. Panel	1	0.1318	19	0.0940	184.7	256	120	V.C.	" " "
Shore Conn. Box	2	.4712	37	.090	600	752	60	V.C.	" " "
Workshop Panel	1	0.0206	7	0.0612	29.1	55.5	160	V.C.	" " "
Vent panel (Quarters)	1	0.0329	7	0.0772	58.8	75	250	V.C.	" " "
Winch panel (hatch covers)	1	0.1659	19	0.1055	276	299	170	V.C.	" " "
I.C. & Light panel	1	0.0658	19	0.0664	95	117	270	V.C.	" " "
Mach. space Light	1	0.0130	7	0.0486	24	41	220	V.C.	" " "
Public space light	1	0.0082	7	0.0385	8	30	192	V.C.	" " "
Accommodation panel	1	0.0206	7	0.0612	37	55.5	50	V.C.	" " "
Mach. space light	1	0.0206	7	0.0612	46	99	220	V.C.	" " "
Light panel (Quarts)	1	0.0521	7	0.0974	46	99	220	V.C.	" " "
Light panel (wheel)	1	0.0130	7	0.0486	21	41	192	V.C.	" " "
Light panel (house)	1	0.0082	7	0.0385	3	30	192	V.C.	" " "
Light panel (Navign)	1	0.0082	7	0.0385	30	41	240	V.C.	" " "
WIRELESS	1	0.0130	7	0.0486	8	11.5	264	Rubber	" " "
SEARCHLIGHT	1	0.0032	7	0.0242	0.4	11.5	500	Rubber	" " "
MASTHEAD LIGHT	1	0.0032	7	0.0242	0.4	11.5	100	Rubber	" " "
SIDE LIGHTS	1	0.0032	7	0.0242	1.0	11.5	50	Rubber	" " "
COMPASS LIGHTS	1	0.0032	7	0.0242	0.4	11.5	600	Rubber	" " "
POOP LIGHTS	1	0.0032	7	0.0242	0.4	11.5	88	V.C.	" " "
Galley Pwr. Panel	1	.0658	19	.066	54	11.7			
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 Sq. Ins.	No.	Diameter.	In Circuit.	A.I.E.E.			
BALLAST PUMP	—	—	—	—	—	—	—	—	—	—
MAIN BILGE LINE PUMPS	—	—	—	—	—	—	—	—	—	—
CONVEYOR	1	1	.0130	7	.038	28.7	41	60	V.C.	L.C. & Armoured
P. & S. Life Boat winches (each)	1	1	.0130	7	.038	38	41	100 & 115	V.C.	" " "
SANITARY PUMP	1	1	0.0130	7	0.0486	28.7	41	110	V.C.	" " "
CIRC. SEA WATER PUMPS	1	1	0.1969	37	0.0822	268	333	240	V.C.	" " "
AUX. CIRC. FRESH WATER PUMPS	1	1	.0658	19	.066	92	117	30	V.C.	" " "
AIR COMPRESSOR SP30 & P33	2	1	0.0329	7	0.0772	56	75	184	V.C.	" " "
FRESH WATER PUMP	2	1	0.0032	7	0.0242	3.3	11.5	96	Rubber	" " "
ENGINE TURNING GEAR	1	1	0.0082	7	0.0385	19.8	23	160	"	" " "
Main condensate pump	1	1	.0329	7	.077	56	75	55	V.C.	" " "
LUBRICATING OIL PUMPS	1	1	0.0329	7	0.0772	38	75	200	V.C.	" " "
No. 1 & #2 stoker (each)	1	1	.0051	7	.030	6.3	22	40 & 65	V.C.	" " "
WINDLASS	1	1	0.1318	19	0.0940	208	256	650	V.C.	" " "
No. 1 & No. 2 Refrig. Comp (each)	1	1	.013	7	.048	28.7	41	30 & 35	V.C.	" " "
Capstan	1	1	0.1045	19	0.0837	145	219	500	V.C.	" " "
#1 & #2 P.D. Fans (each)	1	1	.0329	7	.077	56	75	50 & 80	V.C.	" " "
Winches hatch cover	13	1	0.0206	7	0.0612	42	55.5	310	V.C.	" " "
STEERING GEAR—										
(a) MOTOR GENERATOR	—	—	—	—	—	—	—	—	—	—
(b) MAIN MOTOR	2	1	0.1045	19	0.0837	146	219	600	V.C.	" " "
WORKSHOP MOTOR (each)	3	1	0.0032	7	0.0242	8.3	11.5	92	Rubber	" " "
VENTILATING FANS (Machy.)	2	1	0.0329	7	0.0772	38	75	280	V.C.	" " "
" " ( " )	1	1	0.0130	7	0.0486	19.8	41	330	V.C.	" " "
" " (Quarters)	2	1	0.0051	7	0.0305	10.3	22	190	V.C.	" " "
" " ( " )	1	1	0.0051	7	0.0305	3.3	22	220	V.C.	" " "
" " ( " )	1	1	0.0032	7	0.0242	3.3	11.5	70	Rubber	" " "
" " ( " )	1	1	0.0032	7	0.0242	5.3	11.5	70	Rubber	" " "
" " ( " )	1	1	0.0032	7	0.0242	2.3	11.5	170	Rubber	" " "

A.I.E.E. Rating.



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 35 Ft.

Distance between electric generators or motors and steering compass 25 Ft.

The nearest cables to the compasses are as follows:—

A cable carrying 0.5 Amperes 6 feet from standard compass 15 feet from steering compass.

A cable carrying 2.0 Amperes 6 feet from standard compass 6 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

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 VICTORY Type vessels built for U.S. Maritime Commission.

General Remarks (State quality of workmanship, opinions as to class, etc. The electrical equipment of this vessel)

has been examined and the quality of workmanship and material found to be of a satisfactory nature. All equipment tested under working conditions and found in good, safe, working order.

No.	Capacity (Kilowatts)	Voltage (Volts)	Current (Amperes)	Power Factor	Efficiency (%)	Remarks
1	600	230	1300	0.85	85	Generator
2	600	230	1300	0.85	85	Generator
3	600	230	1300	0.85	85	Generator
4	600	230	1300	0.85	85	Generator
5	600	230	1300	0.85	85	Generator
6	600	230	1300	0.85	85	Generator
7	600	230	1300	0.85	85	Generator
8	600	230	1300	0.85	85	Generator
9	600	230	1300	0.85	85	Generator
10	600	230	1300	0.85	85	Generator
11	600	230	1300	0.85	85	Generator
12	600	230	1300	0.85	85	Generator
13	600	230	1300	0.85	85	Generator
14	600	230	1300	0.85	85	Generator
15	600	230	1300	0.85	85	Generator
16	600	230	1300	0.85	85	Generator
17	600	230	1300	0.85	85	Generator
18	600	230	1300	0.85	85	Generator
19	600	230	1300	0.85	85	Generator
20	600	230	1300	0.85	85	Generator
21	600	230	1300	0.85	85	Generator
22	600	230	1300	0.85	85	Generator
23	600	230	1300	0.85	85	Generator
24	600	230	1300	0.85	85	Generator
25	600	230	1300	0.85	85	Generator
26	600	230	1300	0.85	85	Generator
27	600	230	1300	0.85	85	Generator
28	600	230	1300	0.85	85	Generator
29	600	230	1300	0.85	85	Generator
30	600	230	1300	0.85	85	Generator
31	600	230	1300	0.85	85	Generator
32	600	230	1300	0.85	85	Generator
33	600	230	1300	0.85	85	Generator
34	600	230	1300	0.85	85	Generator
35	600	230	1300	0.85	85	Generator
36	600	230	1300	0.85	85	Generator
37	600	230	1300	0.85	85	Generator
38	600	230	1300	0.85	85	Generator
39	600	230	1300	0.85	85	Generator
40	600	230	1300	0.85	85	Generator
41	600	230	1300	0.85	85	Generator
42	600	230	1300	0.85	85	Generator
43	600	230	1300	0.85	85	Generator
44	600	230	1300	0.85	85	Generator
45	600	230	1300	0.85	85	Generator
46	600	230	1300	0.85	85	Generator
47	600	230	1300	0.85	85	Generator
48	600	230	1300	0.85	85	Generator
49	600	230	1300	0.85	85	Generator
50	600	230	1300	0.85	85	Generator

Total Capacity of Generators 600 Kilowatts.

The amount of Fee ... \$250.00 : When applied for, Jan. 4 1949

Travelling Expenses (if any) \$ 25.00 : When received, Jan. 11 1949

Committee's Minute NEW YORK FEB 9 1949

Assigned ELEC. LIGHT

R. S. Dragunov Surveyor to Lloyd's Register of Shipping.

