

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 3195

Port of Philadelphia Date of First Survey 15<sup>th</sup> Aug. Date of Last Survey 17<sup>th</sup> April 1919 No. of Visits 43.  
 No. in Reg. Book on the Iron or Steel of "SALUDA" Port belonging to Philadelphia  
 Built at Philadelphia Pa. By whom American International Corp. When built 1919.  
 Owners United States Shipping Board Emergency Fleet Corporation Owners' Address Washington D.C.  
 Yard No. 501 Electric Light Installation fitted by American International Corp. When fitted 1919.

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Generators-2-15 K.W. Gen. Elect. Co., 125 driven by vertical marine type engines **volts**  
 80-125 lb. steam pressure  
 Capacity of Dynamo 2 at 120 Amperes at 125 each Volts, whether continuous or alternating current continuous  
 Where is Dynamo fixed Eng. Rm. St'rbd on Dynamo flat Whether single or double wire system is used double wire  
 Position of Main Switch Board Eng. Rm. " "having switches to groups 7 Panels of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each Panel G-Eng. & Boiler Rm. 8-cir; Panel D-Bridge deck port- 6 cir; Panel C Bridge Deck starboard-4 cir Panel B. Officer's Qtrs- 9 cir/ Panel A - Forecastle 4-cir; Panel F-Poop-6Cir; Panel H-Pilot House- 6 cir  
 If fuses are fitted on main switch board to the cables of main circuit yes and on each auxiliary switch board to the cables of auxiliary circuits yes and at each position where a cable is branched or reduced in size yes and to each lamp circuit yes  
 If vessel is wired on the double wire system are fuses fitted to both flow and return wires or cables of all circuits including lamp circuits yes  
 Are the fuses of non-oxidisable metal yes and constructed to fuse at an excess of 125 per cent over the normal current  
 Are all fuses fitted in easily accessible positions yes Are the fuses of standard dimensions yes If wire fuses are used are permanent instructions fitted on or near each switch board giving particulars of proper size of fuse for each circuit All cartridge fuses  
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 245 arranged in the following groups:—

Location	Number of Lights	Watt	Current (Amperes)
A Forecastle	13	25 to 200	8.0
B Officer's Qtrs	61	10 " 200	28.7
C St'rbs	25	25 " 200	12.5
D Port Qtrs	45	25 " 200	20.5
E Poop Qtrs	35	10 " 200	17.7
F Engine & Boiler	62	25 " 100	33.0
G Pilot House	3	50 " 4000	37.3
H Side light	1	50	0.9
I Cargo lights	213	200 Watts	Incandescent

If arc lights, what protection is provided against fire, sparks, &c. Arc for search light only with enclosed Carbons  
 Where are the switches controlling the masthead and side lights placed Panel H. Wheel House

## DESCRIPTION OF CABLES.

Number of Cables	Amperes	Wires	W.G. diameter	Total sectional area
Main cable carrying 120	120	Stranded, each #00	B&S 0.104	square inches
Branch cables carrying 50	50	" wires, each # 2	0.052	square inches
Branch cables carrying 35	35	" wires, each # 6	0.021	square inches
Branch cables carrying 22	22	" wires, each #10	0.0082	square inches
Leads to lamps carrying 18	18	Solid wires, each #12	0.0051	square inches
Leads to lamps carrying 10	10	" wires, each #14	0.0032	square inches
Cargo light cables carrying 10	10	" wires, each #12	0.0051	square inches

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

All lighting wires in Galvanized conduit  $\frac{1}{2}$  in. to 1  $\frac{1}{2}$ " dia  
 #00, # 2, # 6 Rubber covered tape and braid code wire  
 #10, #12, # 14 " " single braid code Wire  
 Joints in cables, how made, insulated, and protected In boxes at conduit Junction (use Benjamin C.I.) Boxes

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances yes Are all joints in accessible positions, none being made in bunkers, cargo spaces, or spaces which may at any time be used for carrying cargo, stores, or baggage yes  
 Are there any joints in or branches from the cable leading from dynamo to main switch board no  
 How are the cables led through the ship, and how protected Galvanized conduit from switchboard to fixture



DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible **yes**

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture  
**In water tight conduit with locknuts and washers at bulk heads**

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat **In galvanized iron conduit**

What special protection has been provided for the cables near boiler casings **in galvanized iron conduit**

What special protection has been provided for the cables in engine room " " " "

How are cables carried through beams **Steel conduit in drilled holes through bulkheads, &c. with locknuts and washers**

How are cables carried through decks " " **with Locknuts & Washers**

Are any cables run through coal bunkers **no** or cargo spaces **yes** spaces which may be used for carrying cargo, stores, or baggage **in steel conduit with guards**

If so, how are they protected **in steel conduit**

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage **not in cargo space**

If so, how are the lamp fittings and cable terminals specially protected **no lamps in cargo space no coal bunkers**

Where are the main switches and fuses for these lights fitted " " " " " " " "

If in the spaces, how are they specially protected " " " " " " " "

Are any switches or fuses fitted in bunkers " " " " " " " "

Cargo light cables, whether portable or permanently fixed **Portable** How fixed **not fixed**

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel **double wire system used**

How are the returns from the lamps connected to the hull **double wire system no grounds**

Are all the joints with the hull in accessible positions " " " " " " " "

Is the installation supplied with a voltmeter **yes** and with an amperemeter **yes**, fixed **on switchboard**

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and fuses fitted in positions not liable to the accumulation of petroleum vapour or gas **yes**

Are any switches, fuses, or joints of cables fitted in the pump room or companion **not oil carrier**

How are the lamps specially protected in places liable to the accumulation of vapour or gas

The copper used is guaranteed to have a conductivity of not less than that of the Engineering Standards Committee's standard, and the wires are protected by tinning from the sulphur compounds present in the insulating material.

Insulation of cables is guaranteed to have a resistance of not less than **600** megohms per statute mile at 60° Fahrenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than 500 volts and while the cable is still immersed.

The foregoing statements are a correct description of the Electric Light installation fitted by us on this vessel and we declare that it is at this date in good order and safe working condition.

*R.D. Murphy*

Electrical Engineers

Date **March 25 1919**

COMPASSES.

Distance between dynamo or electric motors and standard compass **100 feet**

Distance between dynamo or electric motors and steering compass **110 "**

The nearest cables to the compasses are as follows:—

A cable carrying <b>40</b> Amperes	<b>6</b> feet from standard compass	<b>5</b> feet from steering compass
A cable carrying <b>4</b> Amperes	<b>6</b> feet from standard compass	<b>5</b> feet from steering compass
A cable carrying <b>2</b> Amperes	<b>4</b> feet from standard compass	<b>4</b> feet from steering compass

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

The maximum deviation due to electric currents, etc., was found to be **0** degrees on **0** course in the case of the standard compass and **0** degrees on **0** course in the case of the steering compass. **1919**

*G. J. James*

Builder's Signature.

Date **March 25 1919**

GENERAL REMARKS.

*This electric lighting installation has been well fitted and proved satisfactory on trial*

*It is submitted that*

*this vessel is eligible for*

**THE RECORD.**

**ELEC LIGHT.**

*HD* **Kell** **19/5/19**

*J. Blalock*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

*Elec Lt.*

**NEW YORK APR 29 1919**

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

1116.11.—Transfer.



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