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# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 3272

Port of Philadelphia Date of First Survey 17<sup>th</sup> Jan'y '19 Date of Last Survey 28<sup>th</sup> May '19 No. of Visits 29  
 No. in Reg. Book on the Iron or Steel S/S. "SEEKONK" Port belonging to Philadelphia  
 Built at Philadelphia By whom American International Corp. When built 1919  
 Owners United States Shipping Board Owners' Address Washington D.C.  
Emergency Fleet Corporation Electric Light Installation fitted by American International Corp. When fitted 1919

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Dynamos-2-15 K.W. General Electric Co., 125 Volts compound wound and direct connected to vertical marine type steam engine operating at 80-125 lbs pressure  
 Capacity of Dynamo 2 at 120 Amperes at 125 Volts, whether continuous or alternating current continuous  
 Where is Dynamo faced Engine Room St'bd. on Dynamo Flat Whether single or double wire system is used double wire  
 Position of Main Switch Board Dynamo Flat Blkhd. 109 having switches to groups 7 panels of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each Panel G-Engine and Boiler Room-8 circuits; Panel D Bridge Deck port-6 circuits; Panel C Bridge Deck Starboard-4 Circuits; Panel B-Officer's Qtrs 9-circuits; Panel A-Forecastle-4 circuits; Panel F-Poop -6 circuits; 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

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

A Forecastle 13	lights each of 25 to 200 Watts	candle power requiring a total current of	8.0	Amperes
B Officer's Qtrs 61	lights each of 10 " 200 "	candle power requiring a total current of	28.7	Amperes
C Starboard Qtrs 25	lights each of 25 " 200 "	candle power requiring a total current of	12.5	Amperes
D Port Qtrs 43	lights each of 25 " 200 "	candle power requiring a total current of	20.5	Amperes
E Poop " 35	lights each of 10 " 200 "	candle power requiring a total current of	17.7	Amperes
F G-Engine & Boiler	lights each of 25 " 200 "	candle power requiring a total current of	33.0	Amperes
G Pilot House 3	lights each of 50 " 4000 "	(Includes Searchlight)	37.3	Amperes
1 Must head light with	1 lamps each of 50 Watts	candle power requiring a total current of	0.5	Amperes
2 Side light with	1 lamps each of " "	candle power requiring a total current of	0.9	Amperes
13 Cargo lights of	200 Watts	candle power, whether incandescent or arc lights	incandecent	

If are lights, what protection is provided against fire, sparks, &c. Are light with enclosed carbons for Searchlight

Where are the switches controlling the masthead and side lights placed Panel H. Wheel House

## DESCRIPTION OF CABLES.

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

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

All Lighting wires in galvanized conduit  $\frac{1}{4}$ " to 1 $\frac{1}{2}$ " dia  
 #00, #2, #6 Rubber covered tape and braid code wire  
 #10, #12 and #14 " " SINGLE Braid code wire  
 Joints in cables, how made, insulated, and protected In boxes at conduit junction (use Benj. C. I. Box)

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 as washers at Bulkheads

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

What special protection has been provided for the cables near boiler casings " " " "

What special protection has been provided for the cables in engine room Steel Conduit in drilled holes " "

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

How are cables carried through decks " " with locknuts and washers

Are any cables run through coal bunkers no or cargo spaces yes or spaces which may be used for carrying cargo, stores, or baggage 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 or 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 with 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.

*L. O. Murphy*

Electrical Engineers

Date May 15, 1919.

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 100 Ft.

Distance between dynamo or electric motors and steering compass 110 "

The nearest cables to the compasses are as follows:—

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

*G. J. James*

Builder's Signature.

Date May 15, 1919.

**GENERAL REMARKS.**

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

*It is submitted that this vessel is eligible for*

**THE LLOYD'S ELEC. LIGHT.**

*W.D. Kell 27-6-19*

*J. Blalock*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute *Elec Lt.* New York JUN 1-0 1919