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## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 3375

Port of Philadelphia Date of First Survey 28<sup>th</sup> Oct '18 Date of Last Survey 1<sup>st</sup> Aug. '19 No. of Visits 37  
 Built at Philadelphia By whom American International Corp. When built 1919  
 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—two—15 K.W. 125 Volts, compound wound connected, to vertical marine type  
 team engine, Operating at 80-125 lbs. pressure. General Electric Co.  
 Capacity of Dynamos 2 of 120 Amperes at each at 125 Volts, whether continuous or alternating current continuous  
 Where is Dynamo fixed Flat Starboard Side of Engine Room Whether single or double wire system is used double wire  
 Position of Main Switch Board Dynamo Flat near Blkd. switches to groups 7 lighting 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, D-Bridge  
Deck Port -6 circuits, C- Bridge deck starboard-4-circuits; B-Officers Qtrs-9-circuits  
Forecastle-4-circuits, Panel F-Poop-6-Circuits; H-Pilot House- 6 cir  
 Are fuses 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  
 Are all circuits 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-oxidizable 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 Cartridge Fuses used  
 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	Lights	Watts	Candle power	Current
Forecastle	lights each of 13-25 to 200	8.0	Amperes	
Officers Qtrs	lights each of 61-10 to 200	28.7	Amperes	
Starboard	lights each of 25-25 to 200	12.5	Amperes	
Port Qtrs	lights each of 43-25 to 200	20.5	Amperes	
Poop Rm.	35-10 " 200	17.7	Amperes	
G-Engine & Boiler	lights each of 62-25 " 200	33.0	Amperes	
H-1 Pilot House	3- 50 to 4000	37.3	Amperes	
Must head light with	1 lamps each of 50	0.5	Amperes	
2 Side light with	1 lamps each of 50	0.9	Amperes	
13 Cargo lights of	200		Amperes	

Are lights, what protection is provided against fire, sparks, &c. Arc light with enclosed carbons for searchlight

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

## DESCRIPTION OF CABLES.

Cable Description	Amperes	Wires	W.G. diameter	square inches total sectional area
Main cable carrying 120	comprised of <u>stranded</u> , each #00	S.W.G. diameter, 0.104	square inches total sectional area	
Branch cables carrying 50	comprised of " wires, each # 2	S.W.G. diameter, 0.052	square inches total sectional area	
Branch cables carrying 22	comprised of " wires, each # 6	S.W.G. diameter, 0.021	square inches total sectional area	
Branch cables carrying 18	comprised of " wires, each # 10	S.W.G. diameter, 0.0082	square inches total sectional area	
Branch cables carrying 10	comprised of " wires, each # 12	S.W.G. diameter, 0.0051	square inches total sectional area	
Branch cables carrying 10	comprised of " wires, each # 14	S.W.G. diameter, 0.0032	square inches total sectional area	
Branch cables carrying 10	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  $\frac{1}{2}$  in to  $1\frac{1}{2}$  in in dia.

00, #2, #6 Rubber covered tape and braid code wire  
 10, #12 and "14 " single Braid code wire

Wires in cables, how made, insulated, and protected

Are boxes at conduit junction (Benj. C.I. Boxes) yes

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 Bulkheads

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 galvanized iron conduit

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

How are cables carried through beams Steel conduit on drilled holes through bulkheads, &c. with locknuts and 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. D. Murphy*

Electrical Engineers

Date July, 8, 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. J. J.*

Builder's Signature.

Date July 8, 1919

GENERAL REMARKS.

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

*J. Blalock*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

*Elec. L.*

New York AUG 19 1919



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