

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 3458

Port of Philadelphia Date of First Survey 22<sup>nd</sup> April Date of Last Survey 18<sup>th</sup> Sept '19 No. of Visits 27  
 No. in on the Iron or Steel 3/5 "LABETTE" Port belonging to Philadelphia  
 Reg. Book Built at Philadelphia By whom American International Corp When built 1919  
 Owners United States Shipping Board Owners' Address Washington D.C.  
Emergency Ship Corporation  
 Yard No. 541 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, direct connected to vertical marine type engine operating at 80-125 lbs pressure made by General Electric Co.,

Capacity of Dynamo 2 Of 120 Amperes at each at 125 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Flat starboard side of engine rm Whether single or double wire system is used double wire

Position of Main Switch Board Dynamo flat near 109, blk wiring 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 & Boiler room-8 circuits; D-Bridge deck port-6 cir; C-Bridgedeck starboard-4cir; B-Officers-Qtrs-9 cir; A-Forecastle 4 cir; F-Peep- 3 cir; 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 cartridge fuses

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 249 arranged in the following groups :-

Group	Description	Watts	Amperes
A	Forecastle lights each of 15-25 to 200	9.5	Amperes
B	Officers Qtrs lights each of 61-10 " 200	28.7	Amperes
C	Starboard " lights each of 25-25 " 200	12.5	Amperes
D	Port " lights each of 43-25 " 200	20.5	Amperes
F	Peep " lights each of 37-10 " 200	19.2	Amperes
G	Engine & Boiler lights each of 62-25 " 200	33.0	Amperes
H	Pilot House lights each of 3-50 " 4000	37.5	Amperes
1	Mast head light with 1 lamps each of 50	0.5	Amperes
2	Side light with 1 lamps each of 50	0.9	Amperes
3	Cargo lights of 200	incandescent	

If arc lights, what protection is provided against fire, sparks, &c. Arc Light with enclosed carbons for search light

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	Strand 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	" wires, each #10	S.W.G. diameter	0.0082	square inches total sectional area
Leads to lamps carrying	18	Amperes, comprised of	Solid 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  $\frac{1}{2}$  inch to  $1\frac{1}{2}$  in. 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 (Benj. 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 fixtures

5600-4791M



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 in 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. O. Murphy*

Electrical Engineers

Date **August 21, 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	<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.

*G. J. James*

Builder's Signature.

Date **August 21, 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.

*Elect Light*  
*Elect*

*J. Blalock*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.