

# REPORT ON ELECTRIC LIGHTING INSTALLATION.

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Port of Philadelphia Date of First Survey Oct 23 1919 Date of Last Survey July 12 1919 No. of Visits 34  
 No. in Reg. Book on the ~~Iron~~ Steel Iron Screw S.S. "Edelhy" Port belonging to Philadelphia  
 Built at Chester Pa By whom Sun Ship Bldg Co When built 1919  
 Owners United States Shipping Board Owners' Address Washington  
 Yard No. 9 Electric Light Installation fitted by Sun Ship Bldg Co When fitted 1919

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

3 Twenty KW 115 volts direct connected General Electric Co Marine Generating sets with reciprocating engines.

Capacity of Dynamo 174 Amperes at 115 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Engine room Port side Whether single or double wire system is used Double

Position of Main Switch Board Dynamo room having switches to groups 24 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Ten 6 circuit panel boards in 1. 3. 5. 7 cargo hatches (2 in each) Two in port passageway in Bridge House 2 Ten circuit panel boards in Forward & After Bridge House Shelter Deck

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 100 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 *Not used*

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases *Yes* slate

Total number of lights provided for 588 arranged in the following groups:—

A Bridge House	lights each of 32	candle power requiring a total current of 25	Amperes
B Eng & fire room	lights each of 32 75 & 250	candle power requiring a total current of 30	Amperes
C Deck fore & aft	lights each of 800 & 1250	candle power requiring a total current of 60	Amperes
D Hoop quarters	lights each of 32	candle power requiring a total current of 85	Amperes
E Power	lights each of Motors	candle power requiring a total current of 300	Amperes
1 Mast head light with 2 lamps each of 75		candle power requiring a total current of 1	Amperes
2 Side light with 2 lamps each of 75		candle power requiring a total current of 2	Amperes
60 Cargo lights of 75		candle power, whether incandescent or arc lights Incandescent	

If arc lights, what protection is provided against fire, sparks, &c.

1 18" General Electric Searchlight Inclosed

Where are the switches controlling the masthead and side lights placed Tell Tale panel in pilot house

## DESCRIPTION OF CABLES.

Main cable carrying 174 Amperes, comprised of 9 wires, each 4/0 S.W.G. diameter, 0.166 square inches total sectional area
Branch cables carrying 65 Amperes, comprised of 8 wires, each 4 S.W.G. diameter, 0.0328 square inches total sectional area
Branch cables carrying 10 Amperes, comprised of 20 wires, each 6 S.W.G. diameter, 0.0206 square inches total sectional area
Leads to lamps carrying 12 Amperes, comprised of 2 wires, each 14 S.W.G. diameter, 0.00323 square inches total sectional area
Cargo light cables carrying 60 Amperes, comprised of 4 wires, each 4 S.W.G. diameter, 0.0328 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

All joints are well made mechanically, then soldered and wrapped with rubber & friction tape.

Joints in cables, how made, insulated, and protected

All wires are double braided, rubber covered. Wires larger than No 10 are stranded

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 In approved standard galvanized conduit.



**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

made water tight

In conduit

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

In conduit

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

In conduit

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

In conduit

How are cables carried through beams

In conduit

through bulkheads, &c.

In conduit

How are cables carried through decks

In brass pipe

Are any cables run through coal bunkers

No or cargo spaces

Yes

or spaces which may be used for carrying cargo, stores, or baggage

Yes

If so, how are they protected

In conduit fastened to beams

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage

No

If so, how are the lamp fittings and cable terminals specially protected

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

No

Cargo light cables, whether portable or permanently fixed

Portable

How fixed

Plug & receptacle

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

How are the returns from the lamps connected to the hull

Are all the joints with the hull in accessible positions

Is the installation supplied with a voltmeter

Yes

and with an amperemeter

Yes

fixed

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

Are any switches, fuses, or joints of cables fitted in the pump room or companion

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.

Robert - Hall

Electrical Engineers

Date

**COMPASSES.**

Distance between dynamo or electric motors and standard compass

100 ft

Distance between dynamo or electric motors and steering compass

90 ft

The nearest cables to the compasses are as follows:—

A cable carrying

35

Amperes

10

feet from standard compass

12

feet from steering compass

A cable carrying

5

Amperes

5

feet from standard compass

5

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

Yes

The maximum deviation due to electric currents, etc., 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.

Robert - Hall

Builder's Signature.

Date

**GENERAL REMARKS.**

Installed Electric lighting system for turbines & cables for gyro compass.  
This electric lighting installation has been well fitted, and proved satisfactory at full power.

Wm. R. Ham

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Elec. dt.



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