

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 3506

of Philadelphia Date of First Survey May 6 1919 Date of Last Survey Nov 3 1919 No. of Visits 16
on the Iron or Steel S.S. 'ICELAND' Port belonging to Philadelphia
Built at Lechester - Pa By whom Merchants Ship Bldg Coy When built 1919
United States Shipping Board Owners' Address Washington
No. 349 Electric Light Installation fitted by Merchants Ship Bldg Coy When fitted 1919

DESCRIPTION OF DYNAMO, ENGINE, ETC.

10KW Compound wound Westinghouse generators direct connected to Westinghouse steam turbines
Capacity of Dynamo 80 each Amperes at 125 Volts, whether continuous or alternating current continuous
Where is Dynamo fixed Dynamo room Whether single or double wire system is used double
Location of Main Switch Board Dynamo room having switches to groups 13 of lights, &c., as below
Locations of auxiliary switch boards and numbers of switches on each Forecastle 4 switches, officers quarters
switches, quarters aft 2 switches.

Fuses are fitted on main switch board to the cables of main circuit ays and on each auxiliary switch board to the cables of auxiliary
circuits ays and at each position where a cable is branched or reduced in size ays and to each lamp circuit ays
Where is fuse fitted on the double wire system are fuses fitted to both flow and return wires or cables of all circuits including lamp circuits ays
The fuses of non-oxidizable metal ays and constructed to fuse at an excess of 100% per cent over the normal current
All fuses fitted in easily accessible positions ays Are the fuses of standard dimensions ays 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 none used
All switches and fuses constructed of incombustible materials and fitted on incombustible bases ays

Table with columns for description of lights, number of lights, candle power, and amperes. Includes entries for mess room, quarters, forelight, machine tools, mast head light, side lights, and cargo lights.

Where are the switches controlling the masthead and side lights placed Tell Tale in Pilot House.

DESCRIPTION OF CABLES.

Table with columns for cable description, amperes, number of wires, diameter, and sectional area. Includes entries for cables carrying 90, 3, 20, 6, and 2 amperes.

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Double braid 80% pure Para rubber covered wire
Standard galvanized conduit.

How are the cables, how made, insulated, and protected All joints made in watertight junction boxes, ends
soldered & soldered, covered with rubber & linen tape, enclosed in iron
with rubber joint and solid cover

Are the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances ays Are all joints in accessible
positions, none being made in bunks, cargo spaces, or spaces which may at any time be used for carrying cargo, stores, or baggage No
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 All wiring led through conduit with lock nuts,
red lead & canvas through decks & bulkheads.



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 *Led through conduit with watertight junction boxes*

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

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

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

How are cables carried through beams *In conduit with lock nuts & through bulkheads, &c. washers & locknuts*

How are cables carried through decks *" & stuffing tubes*

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*

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 *Receptacle at hatch*

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 *Main 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.

J. E. P. Grant, Chief Engineer, Merchant Ship, Coast Chester Pa Electrical Engineers Date *5-11-19*

COMPASSES.

Distance between dynamo or electric motors and standard compass *140'*

Distance between dynamo or electric motors and steering compass *150'*

The nearest cables to the compasses are as follows:—

A cable carrying <i>35</i> Amperes	<i>10</i> feet from standard compass	<i>15</i> feet from steering compass
A cable carrying <i>3</i> Amperes	<i>2</i> feet from standard compass	<i>3</i> feet from steering compass
A cable carrying <i>-</i> Amperes	<i>-</i> feet from standard compass	<i>-</i> 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 *nil* degrees on *all* courses in the case of the standard compass and *nil* degrees on *all* courses in the case of the steering compass.

J. E. P. Grant, Chief Eng. Merchant Ship, Coast Chester Pa Builder's Signature. Date *5-11-19*

GENERAL REMARKS.

This electric lighting installation has been well fitted, and tried under full power with satisfactory results.

It is submitted that
Wm. Rumbham
ELEC LIGHT. 2/12/19
Surveyor to Lloyd's Register of Shipping.

Committee's Minute *Elec Lt*

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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