

MON 23 JUN 1919

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 3270

Port of Philadelphia Date of First Survey Sept 5 1918 Date of Last Survey May 21 1919 No. of Visits 67
 No. in Reg. Book on the Iron or Steel S.S. Silverbrook Port belonging to Philadelphia
 Built at Chester Penn U.S.A. By whom Chester Shipbuilding Co. Ltd. When built 1918-19
 Owners United States Shipping Board Owners' Address Washington
 Yard No. 344 Electric Light Installation fitted by Chester Shipbuilding Co. Ltd. When fitted 1918-19

DESCRIPTION OF DYNAMO, ENGINE, ETC.

75 H.P. American Blower Co. vertical engine connected to 15 KW W.E. Co. Compound wound Generator
 Capacity of Dynamo 15 KW-120 Amperes at 125 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Dynamo flat Engine Room Whether single or double wire system is used Double
 Position of Main Switch Board Engine Room having switches to groups 11 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each 1 in Engine Room aft 6 sw. 1 Midship accommodations 8 sw 1 Forecastle 4 sw. 1 Tell tale Panel 4 sw.

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-oxidizable 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 None used
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 133 arranged in the following groups:—

Group	Description	Lights	Each of	Candle Power	Requiring a total current of	Amperes
A	4 circuits <u>Toward Panel</u>	14	32		4	
B	7 circuits <u>Midship Panel</u>	89	32		14	
C	6 circuits <u>Eng. Room</u>	21	32		7	
D	4 circuits <u>Forecastle</u>	36	32		12	
E	1 circuit <u>Tell tale Panel</u>	4	32		4	
	1 Mast head light with 2 lamps each of 25				3/10	Amperes
	2 Side light with 2 lamps each of 25				3/5	Amperes
	4 Cargo lights of 18 ²					incandescent

If arc lights, what protection is provided against fire, sparks, &c.
 Where are the switches controlling the masthead and side lights placed Deck House

DESCRIPTION OF CABLES.

Main cable carrying 114 Amperes, comprised of 19 wires, each 14 S.W.G. diameter, .1045 square inches total sectional area
 Branch cables carrying 7-10 Amperes, comprised of 7-1 wires, each 12-18 S.W.G. diameter, .0938 square inches total sectional area
 Branch cables carrying 3-35 Amperes, comprised of 7-1 wires, each 12-16 S.W.G. diameter, .0815 square inches total sectional area
 Leads to lamps carrying 43.5 Amperes, comprised of 1 wires, each 14 S.W.G. diameter, .03225 square inches total sectional area
 Cargo light cables carrying 2 Amperes, comprised of 40 wires, each 29 S.W.G. diameter, .03225 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Double Braid 30% Pure Para rubber covered wire, stranded Galvanized steel conduit
 Joints in cables, how made, insulated, and protected Masteron Union & Twist Slices covered with Rubber & Friction Tape, Steam resistant galvanized junction 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 bunks, 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 Galv. Steel conduit with stuffing tubes



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 Galvanized steel conduit water proof & vapor proof fittings

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

What special protection has been provided for the cables near boiler casings Galv. conduit steam & water tight fittings

What special protection has been provided for the cables in engine room Galv. conduit steam & water tight fittings

How are cables carried through beams Galvanized conduit through bulkheads, &c. Galvanized conduit

How are cables carried through decks Galvanized conduit & stuffing tubes

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

If so, how are they protected Galvanized 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 —

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 yes

Are any switches, fuses, or joints of cables fitted in the pump room or companion no

How are the lamps specially protected in places liable to the accumulation of vapour or gas vapor & Gas proof fixtures

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.

Chester S. Mulherson Electrical Engineers Date 4-25-19

COMPASSES.

Distance between dynamo or electric motors and standard compass 200 ft

Distance between dynamo or electric motors and steering compass 220 ft

The nearest cables to the compasses are as follows:—

A cable carrying	<u>35</u>	Amperes	<u>12</u>	feet from standard compass	<u>9 ft</u>	feet from steering compass
A cable carrying	<u>3</u>	Amperes	<u>2 ft</u>	feet from standard compass	<u>2 ft</u>	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 ✓ no

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.

Chester S. Mulherson Builder's Signature. Date 4-25-19

GENERAL REMARKS.

This electric lighting installation has been well fitted, in accordance with the rules, and proved satisfactory on trial.

It is submitted that this vessel is eligible for THE RECORD.

Committee's Minute

JWD Ell 1.7.19
Elec Lt

New York JUN - 3 1919

Wm. R. Ham
Surveyor to Lloyd's Register of Shipping.



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