

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2091

Port of PHILADELPHIA Date of First Survey Oct. 29. 13 Date of Last Survey Jan. 7. 14 No. of Visits 8
 No. in Reg. Book Supp 52 on the Iron or Steel SS. HAMPDEN Port belonging to Boston
 Built at Camden N.J. By whom New York C.B. & E. When built 1914-1
 Owners Coastwise Steamship Co. Owners' Address Boston Mass
 Yard No. 147 Electric Light Installation fitted by New York C.B. & E. When fitted 1914-1

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two 10 K.W. 110 volt generators, coupled direct to vertical steam engine, built by General Electric Co.

Capacity of Dynamo 90.9 Amperes at 110 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Engine room mid platform Whether single or double wire system is used Double

Position of Main Switch Board - No - having switches to groups A, A1, B, B1, C, C1, D, D1, E, E1 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each A main at midships (C) A1 Main at aft (D) all other groups from main switchboard

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 no wires used

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

Total number of lights provided for 170 arranged in the following groups:—

A	7	lights each of	32	candle power requiring a total current of	4	Amperes
A1	42	lights each of	16	candle power requiring a total current of	21	Amperes
B	64	lights each of	16	candle power requiring a total current of	32	Amperes
B1	8	lights each of	16	candle power requiring a total current of	4	Amperes
C	8	lights each of	16	candle power requiring a total current of	4	Amperes
C1	8	lights each of	16	candle power requiring a total current of	4	Amperes
D	8	lights each of	16	candle power requiring a total current of	4	Amperes
D1	<u>Searchlight</u>	lights each of	16	candle power requiring a total current of	4	Amperes
E	17	lights each of	16	candle power requiring a total current of	35	Amperes
E1	8	lights each of	16	candle power requiring a total current of	8.5	Amperes
	1	Must head light with 2 lamps each of	16	candle power requiring a total current of	4	Amperes
	2	Side light with 2 lamps each of	16	candle power requiring a total current of	2	Amperes
	6	Cargo lights of	64	candle power, whether incandescent or arc lights	incandescent	

If arc lights, what protection is provided against fire, sparks, &c. no arcs

Where are the switches controlling the masthead and side lights placed pilot-house

DESCRIPTION OF CABLES.

Main cable carrying 90.9 Amperes, comprised of 6/18 wires, each #0 13 S.W.G. diameter, .092 square inches total sectional area

Branch cables carrying 32 Amperes, comprised of 7/16 wires, each #8 S.W.G. diameter, .013 square inches total sectional area

Branch cables carrying 21 Amperes, comprised of 7/18 wires, each #10 S.W.G. diameter, .0085 square inches total sectional area

Leads to lamps carrying .5 Amperes, comprised of 1 wire, each #14 S.W.G. diameter, .0033 square inches total sectional area

Cargo light cables carrying 2 Amperes, comprised of 7/22 wires, each #14 S.W.G. diameter, .0036 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

White core double rubber & double cover shaded with double layers of Grimshaw tape, laid in iron conduits

Joints in cables, how made, insulated, and protected mechanical joint - soldered, covered with vulcanite compound taped & coated with insulating compound

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 iron conduits, wood moulding and armored wire covering in quarters.



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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 iron conduits

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

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

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

How are cables carried through beams conduits through bulkheads, &c. W.T. fittings

How are cables carried through decks W.T. fittings

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 heavy conduits (iron)

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 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

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.

Hallagour Electrical Engineers Date 27 Jan 14

COMPASSES.

Distance between dynamo or electric motors and standard compass 250 feet.

Distance between dynamo or electric motors and steering compass 235 feet.

The nearest cables to the compasses are as follows:—

A cable carrying	<u>5</u>	Amperes	<u>3</u>	feet from standard compass	<u>5</u>	feet from steering compass
A cable carrying	<u>✓</u>	Amperes	<u>✓</u>	feet from standard compass	<u>✓</u>	feet from steering compass
A cable carrying	<u>✓</u>	Amperes	<u>✓</u>	feet from standard compass	<u>✓</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 nil degrees on ✓ course in the case of the standard compass and ✓ degrees on ✓ course in the case of the steering compass.

Hallagour Builder's Signature. Date 27 Jan 14

GENERAL REMARKS.

This installation has been fitted in accordance with the Rules found satisfactory. The lighting system has been tried throughout found good.

It is submitted that this vessel is eligible for THE RECORD. Elec. light. JWD 9/2/14

Robert Haig Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute TUE FEB. 10. 1914

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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