

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2389

Port of **PHILADELPHIA** Date of First Survey _____ Date of Last Survey _____ No. of Visits _____
 No. in on the ~~Iron~~ Steel **S.S. "BRISTOL"** Port belonging to **Boston**
 Reg. Book **80** Built at **Camden N.J.** By whom **New York S.B. Co.** When built **1916.2**
 Owners **Longshore Transportation Co.** Owners' Address **Boston.**
 Card No. **169** Electric Light Installation fitted by **New York S.B. Co.** When fitted **1916.2**

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One 30 kw. dynamo steam driven, fitted 5.40 for supplying power for mechanical sloper.
Two (2) 10 KW direct-current generators coupled direct to 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 **superior** Whether single or double wire system is used **double**

Position of Main Switch Board _____ having switches to groups **A, B, C, D, E** of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each **A' main deck amidships port (6). B' main deck aft (6). Pilot house (6) all others on 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 wire fuses**

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	7	Amperes		
B	42	lights each of	16	candle power requiring a total current of	21	Amperes		
C	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		
E	17	lights each of	16	candle power requiring a total current of	8.5	Amperes		
1		Mast head light with	2	lamps each of	16	candle power requiring a total current of	1	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 arc lamps**

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

DESCRIPTION OF CABLES.

Main cable carrying **90.9** Amperes, comprised of **61** wires, each **19** S.W.G. diameter, **.0793** square inches total sectional area
 Branch cables carrying **32** Amperes, comprised of **7** wires, each **17** S.W.G. diameter, **.075** square inches total sectional area
 Branch cables carrying **21** Amperes, comprised of **7** wires, each **17** S.W.G. diameter, **.075** square inches total sectional area
 Leads to lamps carrying **.5** Amperes, comprised of **7** wires, each **23** S.W.G. diameter, **.0031** square inches total sectional area
 Cargo light cables carrying **2** Amperes, comprised of **7** wires, each **23** S.W.G. diameter, **.0031** square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

double rubber covered, leaded & armored throughout.

Joints in cables, how made, insulated, and protected **mechanical joint soldered 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 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 **armored**



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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 none

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

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 Armored cables edge of hole in beam changed. through bulkheads, &c. W.T. fittings.

How are cables carried through decks W.T. fitting & steel conduit.

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 Armored

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 in 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 500 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.

By Hallagom VICE PRESIDENT

Electrical Engineers

Date May 12

COMPASSES.

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

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

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
5	3	10	

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 standard compass and — degrees on — course in the case of the steering compass.

Robert H. King

Builder's Signature.

Date —

GENERAL REMARKS.

This installation stated to have been fitted in accordance with the Rules of this Society

It is submitted that this vessel is eligible for

THE RECORD Elec. light.

J. W. D. 31/5/16

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

Committee's Minute TUE. JUN. 18, 1916

Im. 11.13—Transfer.



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