

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1992

Port of PHILADELPHIA. Date of First Survey Dec 17, 1912 Date of Last Survey Feb 5-13 No. of Visits 7  
 Description of on the Iron or Steel S S Santa Cruz Port belonging to New York  
 No. in Reg. Book 11386 Built at PHILADELPHIA. By whom M. Hampson S. E. B. Co. When built 1913.2  
 Owners Atlantic & Pacific S.S. Co. Owners' Address Hamover Square New York  
 Yard No. 393 Electric Light Installation fitted by M. Hampson S. E. B. Co. When fitted 1913.2

**DESCRIPTION OF DYNAMO, ENGINE, ETC.**  
~~one~~ 15 K.W. Steam engine driven compound wound dynamo, made by the General Electric Co. 400 R.P.M.  
*one. 25 K.W. Steam driven fitted in lieu of one 15 K.W. Bal. 12.37.*

Capacity of Dynamo 137 Amperes at 110 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed Main platform engine room Whether single or double wire system is used double  
 Position of Main Switch Board do having switches to groups A. B. C. E of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Pantry 14 switches. Upper deck amidship 6 switches. Upper platform engine room 6 switches all on water-tight-enclosed panels.

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 cessel 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 now used

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

Total number of lights provided for 307 arranged in the following groups:—

Group	Number of lights	Each of	Candle power	Requiring a total current of	Amperes
A	4	5		6	Amperes
B	45	16		22.5	Amperes
C	250	20		57.5	Amperes
D					Amperes
E	65	FATS lights		37	Amperes
	2	Mast head lights with 2 lamps each	30	75	Amperes
	2	Side light with 2 lamps each	30	75	Amperes

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.**

Description	Amperes	Wires	W.G. diameter	Square inches total sectional area
Main cable carrying	137	61	17	1257
Branch cables carrying	36	61	19	0845
Branch cables carrying	6	1	14	006
Leads to lamps carrying	5	1	16	004
Cargo light cables carrying				

**DESCRIPTION OF INSULATION, PROTECTION, ETC.**  
 Joints in cables, how made, insulated, and protected white core double rubber covered & double covered with fibrous hair & Crinshaw tape. good 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 Completely encased in 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 iron conduit

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

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

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 conduits

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, two, 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 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. F. Metten

W. CRAMP & SONS S. & E. B. CO. Electrical Engineers

Date July 20. 13

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 95 feet

Distance between dynamo or electric motors and steering compass 90 -

The nearest cables to the compasses are as follows:—

A cable carrying	<u>1</u>	Amperes	<u>10</u>	feet from standard compass	<u>6</u>	feet from steering compass
A cable carrying	<u>6</u>	Amperes	<u>10</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

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 none degrees on ✓ course in the case of the standard compass and — degrees on — course in the case of the steering compass.

J. F. Metten

W. CRAMP & SONS S. & E. B. CO. Builder's Signature.

Date July 20. 13

**GENERAL REMARKS.**

This system of electric lighting has been installed in accordance with the Rules found satisfactory. The lighting system has been tested & found to work well.

Robert Haig

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

Committee's Minute FRI. MAR. 7. 1913

5006, 12.—Transfer.

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



© 2020

Lloyd's Register Foundation