

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. *2312*

Port of *Baltimore* Date of First Survey _____ Date of Last Survey *March 2nd 1918* No. of Visits _____
 No. in on the ~~Iron or Steel~~ *S. S. Santee* Port belonging to *New York*
 Reg. Book Built at *Spencer Point* By whom *Bethlehem Shipbuilding Corp. Ltd.* When built *1918*
 Owners *One Steam Ship Corporation* Owners' Address *New York*
 Yard No. *165* Electric Light Installation fitted by *Bethlehem Shipbuilding Corp.* When fitted _____

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Capacity of Dynamo *91* Amperes at *110* Volts, whether continuous or alternating current *Continuous*
 Where is Dynamo fixed *Middle Mast* Whether single or double wire system is used *Double*
 Position of Main Switch Board _____ having switches to groups *5* of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each

*1-4 Circuit Panel in passage in Bridge deck house.**1-6 - Engine Room: 1-5 Circuit Panel in After Quarters.*

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

Are the fuses of non-oxidizable metal *Yes* and constructed to fuse at an excess of *30* per cent on 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 *Enclosure*

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases *Yes*Total number of lights provided for *195* arranged in the following groups:—

A	38	lights each of	20	candle power requiring a total current of	8.6	Amperes
B	68	lights each of	20	candle power requiring a total current of	16.0	Amperes
C	60	lights each of	20	candle power requiring a total current of	17.0	Amperes
D	24	lights each of	20	candle power requiring a total current of	4.6	Amperes
E	5	lights each of	8	candle power requiring a total current of	0.45	Amperes
3	Mast head light with	1 lamp each of	8	candle power requiring a total current of	0.27	Amperes
2	Side light with	1 lamp each of	8	candle power requiring a total current of	0.18	Amperes
24	Cargo lights of	20	candle power, whether incandescent or arc lights	<i>Incandescent</i>		

If arc lights, what protection is provided against fire, sparks, &c. *No arcs except search light in brass metal case.*

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

DESCRIPTION OF CABLES.

Main cable carrying *81* Amperes, comprised of *19* wires, each *.0027* S.W.G. diameter, *.0521* square inches total sectional area
 Branch cables carrying *8.6* Amperes, comprised of *19* wires, each *.0013* S.W.G. diameter, *.0241* square inches total sectional area
 Branch cables carrying *16* Amperes, comprised of *7* wires, each *.0025* S.W.G. diameter, *.0179* square inches total sectional area
 Leads to lamps carrying *2* Amperes, comprised of *7* wires, each *.0008* S.W.G. diameter, *.0035* square inches total sectional area
 Cargo light cables carrying *4.6* Amperes, comprised of *19* wires, each *.0013* S.W.G. diameter, *.0241* square inches total sectional area

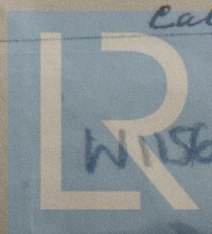
DESCRIPTION OF INSULATION, PROTECTION, ETC.

Lead covered and steel armoured cable with 30% Para rubber in solution, on each conductor

Joints in cables, how made, insulated, and protected

All joints in junction boxes screwed fittings

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances _____ 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 _____

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 *Lead covered + steel armoured cables.*

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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 *Lead covered & steel armoured cables.*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Lead covered & steel armoured cables.*

What special protection has been provided for the cables near boiler casings *Lead covered & steel armoured cables.*

What special protection has been provided for the cables in engine room *Lead covered & steel armoured cables.*

How are cables carried through beams *Lead covered & steel armoured through bulkheads, &c. Lead covered & steel armoured with stuffing boxes.*

How are cables carried through decks *Lead covered & steel armoured cables, thru' deck tubes, & stuffing boxes.*

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

If so, how are they protected *✓*

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 & fixed.* How fixed *Clamped to beams & decks.*

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 *Yes.*

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.

BETHLEHEM SHIPBUILDING CORP., LTD.

SPARROWS POINT PLANT

ASST. GENERAL MANAGER

Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass *316 feet*

Distance between dynamo or electric motors and steering compass *316 feet*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
1	✓	✓	✓
3	1.5	1.5	1.5
5	10	10	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 *Nil* degrees on *✓* course in the case of the standard compass and *Nil* degrees on *✓* course in the case of the steering compass.

BETHLEHEM SHIPBUILDING CORP., LTD.

SPARROWS POINT PLANT

ASST. GENERAL MANAGER

Builder's Signature.

Date

14th March 1918

GENERAL REMARKS.

This installation has been fitted in an efficient manner and in accordance with the Rules of this Society. The generator has been tested under full load & found satisfactory. Side and head lights tested.

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

W.D. 10/4/18.

Wm. Stewart.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Elec. Light

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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