

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 17520

Port of New York Date of First Survey 16 July Date of Last Survey 28 Aug/19 No. of Visits 4
 No. in 3/s on the Steel S/S Newark Port belonging to Elizabethport, N.J.
 No. in 7 Book Elizabeth, New Jersey By whom Bethlehem Ship Corp. Ltd When built 1919-8
 Owners United States Shipping Board Owners' Address Philadelphia, Pa.
 No. 117 Electric Light Installation fitted by Bethlehem Ship Corp. Ltd When fitted 1919-8

DESCRIPTION OF DYNAMO, ENGINE, ETC.

2 General Electric, Type M.P. 6-10-475, Form C, 475 R.P.M.

Capacity of Dynamo 10 K.W. 91 Amperes at 110 Volts, whether continuous or alternating current D.C.

Where is Dynamo fixed Aft End of Engine Room Whether single or double wire system is used Double

Position of Main Switch Board Aft of Dynamo, having switches to groups _____ of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each 6 in Panel box in Forecastle.
8 " " " Amidships Quarters.
8 " " " Aft Quarters.

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.

Are the fuses of non-oxidizable metal Yes, and constructed to fuse at an excess of 10 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 _____

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

Total number of lights provided for 203, arranged in the following groups:—

Forecastle.	19 lights each of	25 watts	candle power requiring a total current of	8.71 Amperes
Midship Qtrs.	68 lights each of	25	" " " " candle power requiring a total current of	21.01 Amperes
Aft Quarters	72 lights each of	25	" " " " candle power requiring a total current of	22.88 Amperes
Eng. Room	34 lights each of	25	" " " " candle power requiring a total current of	8.84 Amperes
Searchlight.	1 lights each of	3850	" " " " candle power requiring a total current of	35.00 Amperes
1 Mast head light with	2 lamps each of	40 watt	candle power requiring a total current of	.33 Amperes
2 Side light with	1 lamps each of	40	" " " " candle power requiring a total current of	.66 Amperes
6 Cargo lights of		240	" " " " candle power, whether incandescent or arc lights	11.88 "

Are arc lights, what protection is provided against fire, sparks, &c. Incandescent.

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

DESCRIPTION OF CABLES.

Main cable carrying	109.79 Amperes, comprised of	wires, each	S.W.G. diameter,	100,000 square inches total sectional area
Branch cables carrying	35.00 Amperes, comprised of	wires, each	S.W.G. diameter,	60,000 square inches total sectional area
Branch cables carrying	20.88 Amperes, comprised of	wires, each	S.W.G. diameter,	40,000 square inches total sectional area
Wires leading to lamps carrying	3.5 Amperes, comprised of	wires, each	S.W.G. diameter,	4,000 square inches total sectional area
Cargo light cables carrying	.33 Amperes, comprised of	wires, each	S.W.G. diameter,	4,000 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

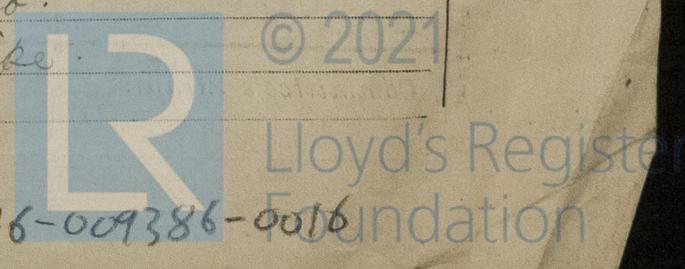
1 U.S. Navy standard plain cable run in pipe throughout ship.

How are the joints in cables, how made, insulated, and protected 1. Soldered. 2. Rubber tape. 3. Protection tape. 4. Painted with P.B.

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 Run in iron pipe.



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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 *Pipe*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Kept proper distance from same*

What special protection has been provided for the cables near boiler casings *Kept proper distance from same*

What special protection has been provided for the cables in engine room *Pipe*

How are cables carried through beams *Pipe* through bulkheads, &c. *Pipe*

How are cables carried through decks *Pipe*

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 *Pipe*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *Yes in Cargo Hold*

If so, how are the lamp fittings and cable terminals specially protected *Used cargo hold fixtures*

Where are the main switches and fuses for these lights fitted *Panel in Forecastle*

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 *Both* How fixed *Strapped to deck*

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 switch board

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 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 *625* 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.

William Shipbuilding Corp Home Plant Electrical Engineers Date *Sept 20-1919*
Arthur L. Smith, Shipyard Manager

COMPASSES.

Distance between dynamo or electric motors and standard compass *176 feet*

Distance between dynamo or electric motors and steering compass *175 feet*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>35</i> Amperes	<i>(Searchlight)</i> 6 feet from standard compass	5 feet from steering compass
A cable carrying	1 Amperes	6 feet from standard compass	5 feet from steering compass
A cable carrying	<i>33</i> Amperes	6 feet from standard compass	5 feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power

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.

William Shipbuilding Corp Home Plant Builder's Signature. Date *Sept 20-1919*
Arthur L. Smith, Shipyard Manager

GENERAL REMARKS.

The fitting of the wires throughout this vessel is as stated in this report & appears to be in accordance with the Committee's requirements.

It is submitted that this vessel is eligible for THE RECORD Elec. light. *JWD* *18/10/19* *J. Hudson*
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute *Elec Lt* *1919*

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THE SURVEYORS ARE REQUESTED NOT TO WRITE IN THIS MARGIN.

