

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1495

Port of Boston Date of First Survey 15 June 1921 Date of Last Survey 1 July 1921 No. of Visits 8
 No. in Reg. Book 1/5 J. FLETCHER FARRELL Port belonging to New York
 Built at Quincy, Mass. By whom Bethlehem S. B. Corporation When built 1921
 Owners Sinclair Navigation Co Owners' Address 130 Broadway New York City
 Yard No. 1396 Electric Light Installation fitted by Bethlehem S. B. Corporation When fitted 1921

DESCRIPTION OF DYNAMO, ENGINE, ETC.

2-15 KW General Electric Co's generators, direct driven by vertical steam engines

Capacity of Dynamo 137 Amperes at 110 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed engine room Whether single or double wire system is used double
 Position of Main Switch Board engine room having switches to groups A & N of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each 1 in forecabin with 4, 1 in midship house with 8, 1 in after quarters with 8, 1 in engine room with 4.

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 no.

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 all but lamp circuits

Are the fuses of non-oxidizable metal yes and constructed to fuse at an excess of less than 100 per cent over the normal current

Are all fuses fitted in easily accessible positions yes Are the fuses of standard dimensions yes enclosed type 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 on fuse cases

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

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

A	Quarters Aft	87	lights each of	20	candle power requiring a total current of	23.6	Amperes
B	E.R. lower part	14	lights each of	20	candle power requiring a total current of	3.5	Amperes
C	" " " "	15	lights each of	20	candle power requiring a total current of	3.7	Amperes
D	" " upper	10	lights each of	20	candle power requiring a total current of	2.5	Amperes
E	Boiler Room	18	lights each of	20	candle power requiring a total current of	4.1	Amperes
F	{ 3 Mast head light with 1 lamps each of 32				candle power requiring a total current of	} 3.6	Amperes
	{ 2 Side light with 1 lamps each of 32				candle power requiring a total current of		
G	3 Cargo lights of 6 light clusters				candle power, whether incandescent or are lights	incandescent	

If arc lights, what protection is provided against fire, sparks, &c. ✓

Where are the switches controlling the masthead and side lights placed engine room + pilot house

DESCRIPTION OF CABLES.

Main cable carrying 137 Amperes, comprised of 61 wires, each .057" S.W.G. diameter, .157 square inches total sectional area
 ABCDE Branch cables carrying 4.1 Amperes, comprised of 7 wires, each .025" S.W.G. diameter, .003 square inches total sectional area
 F Branch cables carrying 3.6 Amperes, comprised of 7 wires, each .036" S.W.G. diameter, .007 square inches total sectional area
 Leads to lamps carrying 3 Amperes, comprised of 7 wires, each .025" S.W.G. diameter, .003 square inches total sectional area
 Cargo light cables carrying 3 Amperes, comprised of 17 wires, each .014" S.W.G. diameter, .002 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Heavy rubber insulation covered with braided waterproof fibre + carried in steel conduit throughout.

Joints in cables, how made, insulated, and protected Soldered well taped + made in metal junction boxes throughout

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 steel conduit



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DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *steel conduit*

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *steel conduit made tight*

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

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

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

How are cables carried through beams *steel conduit* through bulkheads, &c. *steel conduit made tight*

How are cables carried through decks *steel conduit made tight*

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

If so, how are they protected *steel conduit run high up under deck*

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 *Attachment plugs provided*

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 with 2*, fixed *on main 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 *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 *Heavy airtight glass globe with wire guards*

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 S.B. CORP^N

FORE RIVER PLANT

S. H. Mahan

GEN^L MGR.

Electrical Engineers

Date 15 July 1921.

COMPASSES.

Distance between dynamo or electric motors and standard compass *about 200 feet*

Distance between dynamo or electric motors and steering compass *200 "*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	close to	feet from standard compass	close to	feet from steering compass
Binnacle	8				
A cable carrying	3.6 (Hampton)	about 6	feet from standard compass	about 6	feet from steering compass
A cable carrying	35 (Sandlight)	" 6	feet from standard compass	" 6	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 _____ degrees on _____ course in the case of the standard compass and _____ degrees on _____ course in the case of the steering compass.

BETHLEHEM S.B. CORPORATION LTD
FORE RIVER PLANT

Builder's Signature.

Date

GENERAL REMARKS.

This Electric Light Installation has been fitted on board under Special Survey in accordance with the Rules & approved plans & the workmanship & material are good. It has been satisfactorily tried under full load & it is now in good & safe working condition & eligible in my opinion to receive the notation 'ELEC. LIGHT' in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. ELEC. LIGHT.

John S. Heck

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

New York JUL 26 1921

Elect. light



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