

Feb. 28. 1917

MAR 22 1917

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 899

Port of Boston Date of First Survey 2 Feb/1917 Date of Last Survey 17 Feb/1917 No. of Visits 7
 No. in Reg. Book on the Iron-Steel 1/2 MIELERO Port belonging to New York
 Built at Quincy, Mass By whom Fore River S B Corp When built 1917
 Owners Cuba Distilling Co. Owners' Address 40 Exchange Place, New York City
 Yard No. 252 Electric Light Installation fitted by Fore River S B Corporation When fitted 1917

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two 15 K W 6 pole compound wound generators direct driven by vertical steam engines
 Capacity of Dynamo 137 V Amperes at 110 V 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, B, C, D, E, F, G, H, J, K, L of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each One in Quarter Aft with 6 switches, 1 in Quarter Midships with 8 switches, 1 Tell tale in Pilot House with 4 switches for Navigation Lights
 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 to all but lamp circuits
 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 25 to 100 per cent over the normal current
 Are all fuses fitted in easily accessible positions Yes Are the fuses of standard dimensions 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 Yes
 Total number of lights provided for 233 arranged in the following groups:—
 A Quarter Aft 68 lights each of 20 candle power requiring a total current of 17 Amperes
 B E.R. Upper 11 lights each of 20 candle power requiring a total current of 3 Amperes
 C Lower Port 12 lights each of 20 candle power requiring a total current of 3 Amperes
 D Star 11 lights each of 20 candle power requiring a total current of 3 Amperes
 E Search Light lights each of candle power requiring a total current of 23 Amperes
 F 2 Mast head light with 1 lamp each of 40 candle power requiring a total current of 1 Amperes
2 Side light with 1 lamp each of 40 candle power requiring a total current of 1 Amperes
32 Cargo lights of candle power, whether incandescent or arc lights 30 incandescent 2 arc
 If arc lights, what protection is provided against fire, sparks, &c. Heavy glass globes with wire protection
One light will only be used while carrying molasses or non-inflammable cargoes
 Where are the switches controlling the masthead and side lights placed Engine room & pilot houses

DESCRIPTION OF CABLES.

Main cable carrying 137 Amperes, comprised of 61 wires, each 0.45" S.W.G. diameter, 0.98 square inches total sectional area
 Branch cables carrying 17 Amperes, comprised of 37 wires, each 0.4" S.W.G. diameter, 0.47 square inches total sectional area
 Branch cables carrying 3 Amperes, comprised of 7 wires, each 0.25" S.W.G. diameter, 0.03 square inches total sectional area
 Leads to lamps carrying 3 Amperes, comprised of 7 wires, each 0.25" S.W.G. diameter, 0.03 square inches total sectional area
 Cargo light cables carrying 7 Amperes, comprised of 25 wires, each 0.1" S.W.G. diameter, 0.03 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Heavy rubber insulation covered with braided waterproof fibre. Carried in steel conduit throughout except in officers cabins where wood moulding is used

Joints in cables, how made, insulated, and protected Soldered, well taped & made in metal junction boxes
Where wood moulding is used, joints are made in porcelain junction boxes

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 conduits



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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 *Steel Conduits*

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

What special protection has been provided for the cables near boiler casings *Steel conduits*

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

How are cables carried through beams *Steel conduits* through bulkheads, &c. *Steel conduits made watertight*

How are cables carried through decks *Steel conduits made watertight*

Are any cables run through coal bunkers *Yes* or cargo spaces *20* or spaces which may be used for carrying cargo, stores, or baggage *Yes*

If so, how are they protected *Steel conduits 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 *Yes*

If so, how are the lamp fittings and cable terminals specially protected *Lamps fitted high up under deck & are protected by heavy glass globes & wire guards which could be replaced by metal caps.*

Where are the main switches and fuses for these lights fitted *Engine Room*

If in the spaces, how are they specially protected *no*

Are any switches or fuses fitted in bunkers *no*

Cargo light cables, whether portable or permanently fixed *portable* How fixed *Attachment boxes provided*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *no*

How are the returns from the lamps connected to the hull *no*

Are all the joints with the hull in accessible positions *no*

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 *Yes*

How are the lamps specially protected in places liable to the accumulation of vapour or gas *Gas proof metallic fittings with heavy air tight glass globes & 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.

FORE RIVER SHIPBUILDING CORP.
QUINCY, MASS.

VICE PRESIDENT

Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass *Wireless motor about 20 feet*

Distance between dynamo or electric motors and steering compass *12 "*

The nearest cables to the compasses are as follows:—

A cable carrying	Ampere	Distance from standard compass	Distance from steering compass
<i>14</i>	<i>close to</i>	<i>close to</i>	<i>close to</i>
<i>4</i>	<i>abt 10</i>	<i>abt 8</i>	<i>abt 8</i>
<i>19</i>	<i>16</i>	<i>12</i>	<i>12</i>

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 *no* degrees on *no* course in the case of the standard compass and *no* degrees on *no* course in the case of the steering compass.

FORE RIVER SHIPBUILDING CORP.
QUINCY, MASS.

VICE PRESIDENT

Builder's Signature.

Date

GENERAL REMARKS. This installation has been fitted in accordance with the Rules & approved plans & the workmanship & material are good. The installation is a duplicate of those fitted in *1/2 Cabot's Boston report 852 & 1/2 Lucia Boston report 859*. It has been satisfactorily tried under full load & the vessel is 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. *JWD 27/3/17*

John S. Heck

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Elec. light

New York MAR 1 1917

Rpt. 9a.

Port of

Boston

Continuation of Report No. *899* dated *23 Feb 1917* on the

Electric Light Installation
of
1/2 MIELERO of New York

Groups of Lights continued

<i>G Wireless</i>	<i>2 KW</i>	<i>requiring a total current of 20 amps</i>
<i>H Fire Room</i>	<i>10 lights</i>	<i>each of 20 w requiring a total current of 3 amps</i>
<i>J "</i>	<i>upper 8</i>	<i>" " " " " 2</i>
<i>K Quarters</i>	<i>79</i>	<i>" " " " " 20</i>
<i>L Cargo</i>	<i>30</i>	<i>" " " " " 20 + 2 amps " " " 25</i>

Description of Cables continued.

<i>C</i>	<i>carrying 3 amps</i>	<i>comprised of 7 wires each .025" dia</i>	<i>.023" total sectional area</i>				
<i>D</i>	<i>3</i>	<i>7</i>	<i>.025</i>	<i>.023</i>			
<i>E</i>	<i>23</i>	<i>19</i>	<i>.04</i>	<i>.023</i>			
<i>F</i>	<i>4</i>	<i>7</i>	<i>.045</i>	<i>.011</i>			
<i>G</i>	<i>20</i>	<i>7</i>	<i>.057</i>	<i>.018</i>			
<i>H</i>	<i>3</i>	<i>7</i>	<i>.025</i>	<i>.023</i>			
<i>J</i>	<i>4</i>	<i>7</i>	<i>.025</i>	<i>.023</i>			
<i>K</i>	<i>20</i>	<i>61</i>	<i>.04</i>	<i>.078</i>			
<i>L</i>	<i>25</i>	<i>19</i>	<i>.045</i>	<i>.031</i>			

J. S. H.

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