

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 712

Port of Boston Date of First Survey Aug 2 Date of Last Survey Nov 15 No. of Visits 6
 No. in Reg. Book on the Steel S/S NELSON Port belonging to New York
 Built at Quincy Mass By whom Jore River Shipbuilding Co. When built Quincy
 Owners Cuba Distilling Company Owners' Address O'Reilly & Havana Cuba
 Yard No. 207 Electric Light Installation fitted by Jore River Shipbuilding Co. When fitted 1912

DESCRIPTION OF DYNAMO, ENGINE, ETC.

1-15 K.W. 115 Volt, direct connected generator driven by a reciprocating engine. One duplicate of this machine fitted, both connected to board

Capacity of Dynamo 130 Amperes at 110 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Both on starboard side of engine room Whether single or double wire system is used Double wire

Position of Main Switch Board Starboard side of engine room Having switches to groups Six of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each One eight circuit switch board on upper deck in saloon. All the board for running lights in pilot house. One six circuit switch board located on poop deck.

If cut outs 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 as required to each lamp circuit yes

If vessel is wired on the double wire system are cut outs fitted to both flow and return wires or cables of all circuits including lamp circuits yes

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

Are all cut outs 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 N.E. Code

Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 175 arranged in the following groups:—

A	53 lights each of	16 candle power requiring a total current of	26.5 Amperes
B	38 lights each of	16 candle power requiring a total current of	19 Amperes
C	10 lights each of	16 candle power requiring a total current of	5.0 Amperes
D	30 lights each of	16 candle power requiring a total current of	15.0 Amperes
E	35 lights each of	16 candle power requiring a total current of	17.5 Amperes

1 Mast head light with 2 lamps each of 32 candle power requiring a total current of 2 Amperes

2 Range 2 lamps each of 32 candle power requiring a total current of 4 Amperes

2 Side light with 4 lamps each of 32 candle power requiring a total current of 2 Amperes

2 Cargo lights of 1200 C.P. each 5 cargo lights 96 C.P. each 32 candle power, whether incandescent or arc lights Both

If arc lights, what protection is provided against fire, sparks, &c. ARC lamps have inner and outer globe.

Where are the switches controlling the masthead and side lights placed All the board in pilot house.

DESCRIPTION OF CABLES.

Main cable carrying	110 Amperes, comprised of	61 wires, each	17 B.S. L.S.G. diameter, .0453-	.0976 square inches total sectional area
Branch cables carrying	27 Amperes, comprised of	61 wires, each	17 B.S. L.S.G. diameter, .0453-	.0976 square inches total sectional area
Branch cables carrying	19 Amperes, comprised of	19 wires, each	18 B.S. L.S.G. diameter, .0403-	.0242 square inches total sectional area
Leads to lamps carrying	6.5 Amperes, comprised of	7 wires, each	19 B.S. L.S.G. diameter, .036-	.0071 square inches total sectional area
Cargo light cables carrying	8.5 Amperes, comprised of	7 wires, each	19 B.S. L.S.G. diameter, .036-	.0071 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Para rubber, with layer of vulcanized rubber layer of cotton tape. Two even conductors laid together and covered with two layers of close braid. Both wire laid in metal conduit

Joints in cables, how made, insulated, and protected Insulation cleaned from wire ends. One turned a wireman's joint made and soldered. The joint is wrapped with tape and friction tape and laid in metal junction box.

Are all the joints of cables thoroughly soldered, resin only having been used as a flux 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 In metal conduit, except in saloon, pilot house and Officers quarters where they are in approved mouldings.

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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 *Conduit.*

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

What special protection has been provided for the cables near boiler casings *Conduit.*

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

How are cables carried through beams *In conduit* through bulkheads, &c. *Stuffing tubes*

How are cables carried through decks *Stuffing tubes.*

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

If so, how are they protected *Conduit.*

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 cut outs for these lights fitted ☒

If in the spaces, how are they specially protected ☒

Are any switches or cut outs fitted in bunkers *No.*

Cargo light cables, whether portable or permanently fixed *Portable* How fixed *Socket and plug.*

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 ☒

The installation is *fitted and* supplied with a voltmeter and *with* an amperemeter, fixed at main board

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and cut-outs fitted in positions not liable to the accumulation of petroleum vapour or gas *Yes.*

Are any switches, cut outs, 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 *Steam tight globe.*

The copper used is guaranteed to have a conductivity of *98* per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than *600* megohms per statute mile after 24 hours' immersion in seawater.

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 Co.

H. Brown
ASST TO PRESIDENT.

Electrical Engineers

Date *November 29th 1912*

COMPASSES.

Distance between dynamo or electric motors and standard compass *225'-0"*

Distance between dynamo or electric motors and steering compass *235'-0"*

The nearest cables to the compasses are as follows:—

A cable carrying *3* Amperes *5* feet from standard compass *15* feet from steering compass

A cable carrying *2* Amperes *5* feet from standard compass *10* feet from steering compass

A cable carrying *7* Amperes *20* feet from standard compass *30* 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 *Nil.* degrees on course in the case of the

standard compass and *degrees on* course in the case of the steering compass.

Fore River Shipbuilding Co.

H. Brown
ASST TO PRESIDENT.

Builder's Signature.

Date *November 29th 1912*

GENERAL REMARKS.

The workmanship throughout is good and in general accordance with the Rules

It is submitted that this vessel is eligible for

THE RECORD Elec. light.

JWD 16/12/12

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

B. Stewart Murray

Committee's Minute

TUE. DEC. 17. 1912

TUE. DEC. 24. 1912

FRI. APR. 11. 1913

FRI. OCT. 30. 1914

FRI. AUG. 29. 1913

TUE. APR. 15. 1913

TUE. NOV. 10. 1914

TUE. DEC. 9. 1913

FRI. JAN. 16. 1914

FRI. MAY. 2. 1913

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.