

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1165

Port of Newport News Date of First Survey March 28 Date of Last Survey April 17 1917 No. of Visits 6
 No. in Reg. Book (NEW) on the Iron or Steel SS "MANDELTA" Port belonging to NEW YORK
 Built at NEWPORT NEWS By whom N. N. S. B. + D. I. Co When built 1917-4
 Owners MILITARY S. S. LINES Owners' Address NEW YORK
 Yard No. 200 Electric Light Installation fitted by NEWPORT NEWS S. B. + D. I. Co When fitted 1917-4

DESCRIPTION OF DYNAMO, ENGINE, ETC.

15 K.W. General Electric Co's Marine Type - direct connection to 8" x 6" vertical engine -

Capacity of Dynamo 136 Amperes at 110 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Engine Starting Platform Whether single or double wire system is used Double

Position of Main Switch Board Near dynamo having switches to groups 11 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Two in bridge quarters
6 switches each -

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 yes

Are the fuses of non-oxidizable metal yes and constructed to fuse at an excess of 50 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 Standard

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

Total number of lights provided for 198 arranged in the following groups :-

A	<u>24</u> <u>35</u>	lights each of	" <u>MAZDA</u> "	<u>16</u>	candle power requiring a total current of	<u>7.2</u> <u>10.5</u>	Amperes
B	<u>18</u> <u>15</u>	lights each of	"	"	candle power requiring a total current of	<u>5.4</u> <u>2.7</u>	Amperes
C	<u>12</u> <u>11.2</u>	lights each of	"	"	candle power requiring a total current of	<u>4.5</u> <u>3.6</u>	Amperes
D	<u>4.4</u> <u>1.2</u>	lights each of	"	"	candle power requiring a total current of	<u>3.3</u> <u>3.6</u>	Amperes
E	<u>1.2</u> <u>1.6</u>	lights each of	"	"	candle power requiring a total current of	<u>18.2</u> <u>3.6</u>	Amperes
1	Mast head light with <u>2</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>2.0</u>	Amperes		
2	Side light with <u>2</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>2.0</u>	Amperes		
6	Cargo lights of	<u>64</u>	candle power, whether incandescent or arc lights	<u>In Conduit</u>			

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

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

DESCRIPTION OF CABLES.

Main cable carrying	<u>136</u> Amperes, comprised of	<u>37</u> wires, each	<u>#15</u> S.W.G. diameter,	<u>.150</u> square inches total sectional area
Branch cables carrying	<u>10.5</u> Amperes, comprised of	<u>19</u> wires, each	<u>#18</u> S.W.G. diameter,	<u>.0125</u> square inches total sectional area
Branch cables carrying	<u>5.4</u> Amperes, comprised of	<u>7</u> wires, each	<u>#19</u> S.W.G. diameter,	<u>.023</u> square inches total sectional area
Leads to lamps carrying	<u>2.7</u> Amperes, comprised of	<u>4</u> wires, each	<u>#14</u> S.W.G. diameter,	<u>.0050</u> square inches total sectional area
	<u>13.2</u> Amperes, comprised of	<u>7</u> wires, each	<u>#17</u> S.W.G. diameter,	<u>.017</u> square inches total sectional area
Cargo light cables carrying	<u>.3</u> Amperes, comprised of	<u>1</u> wires, each	<u>#16</u> S.W.G. diameter,	<u>.0032</u> square inches total sectional area
	<u>2</u> Amperes, comprised of	<u>1</u> wires, each	<u>#16</u> S.W.G. diameter,	<u>.0032</u> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Rubber tape, braided in non conduit - flexible work tubing and wood moulding in cabins

Joints in cables, how made, insulated, and protected Soldered, Rubber tape, braids in iron 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 bunks, 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 Iron Conduit - Wood moulding in Bridge quarters -



DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible no

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture Iron Conduit

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

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

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

How are cables carried through beams Iron Conduit through bulkheads, &c. Conduit + glands

How are cables carried through decks W. T. Glands

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 Iron Conduit

Are any lamps fitted in ~~coal bunkers~~ spaces which may at times be used for cargo, ~~stores~~, or baggage yes

If so, how are the lamp fittings and cable terminals specially protected W. T. Glands, Iron Cables - Pass across beams

Where are the main switches and fuses for these lights fitted Main Switchboard

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 ✓

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 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 ✓

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.

Newport News Shipbuilding & Dry Dock Co.,

By A. L. Wood Electrical Engineers Date April 23, 1917
 Assistant to the President

COMPASSES.

Distance between dynamo or electric motors and standard compass 135 ft.

Distance between dynamo or electric motors and steering compass 127 ft.

The nearest cables to the compasses are as follows:—

A cable carrying <u>.3</u> Amperes	<u>6</u> feet from standard compass	<u>4</u> feet from steering compass
A cable carrying <u>3.0</u> Amperes	<u>6</u> feet from standard compass	<u>6</u> feet from steering compass
A cable carrying _____ Amperes	_____ feet from standard compass	_____ 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.

By A. L. Wood Builder's Signature. Date April 23, 1917
 Newport News Shipbuilding & Dry Dock Co.

GENERAL REMARKS.

The installation has been fitted in accordance with Rule requirements; the workmanship and protection are good. The vessel is eligible in my opinion to have the record "Electric Light"

It is submitted that this vessel is eligible to
THE RECORD. Elec. Light.
John A. Morrison
 Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute JWD 7/5/17
Elec Light
 New York APR 26 1917

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

Im. 9.14.—Transfer.

