

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1682

Port of Newport News Date of First Survey Nov 27th Date of Last Survey Dec 7th No. of Visits 4
 No. in on the Iron or Steel S.S. "F. J. FISCHER" Port belonging to NEWPORT NEWS
 Reg. Book 4 Built at Newport News Va By whom Newport News S.I.S.A. Co. When built 1918-12
 Owners Standard Oil Co of N.J. Owners' Address New York (26 Broadway)
(U.S.B. FLEET (G.R.P.))
 Yard No. 209 Electric Light Installation fitted by Newport News S.I.S.A. Co. When fitted 1918

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two sets:- General Electric Co's Marine Type 20 K.W. Dynamos
direct connected to 9"x7" Vertical Engines
 Capacity of Dynamo each:- 82 Amperes at 110 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Aft end of Engine Room Whether single or double wire system is used Double
 Position of Main Switch Board near Dynamos having switches to groups nine of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Quarters Aft:- 8 switches
Bridge Quarters 2:- 6 switches

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 100 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 274 arranged in the following groups:-

A	<u>79</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>39.5</u>	Amperes
B	<u>34</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>17.0</u>	Amperes
C	<u>29</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>14.5</u>	Amperes
D	<u>40</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>20.0</u>	Amperes
E	<u>22</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>11.0</u>	Amperes
	<u>2</u>	Mast head light with <u>2</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>1</u>	Amperes
	<u>2</u>	Side light with <u>2</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>2</u>	Amperes
	<u>16</u>	Cargo lights of	<u>16</u>	candle power, whether incandescent or arc lights	<u>INCANDESCENT</u>	

If arc lights, what protection is provided against fire, sparks, &c. NONE

Where are the switches controlling the masthead and side lights placed PILOT HOUSE

DESCRIPTION OF CABLES.

Main cable carrying 82 Amperes, comprised of 37 wires, each # 12 S.W.G. diameter, .300 square inches total sectional area
 Branch cables carrying 39.5 Amperes, comprised of 19 wires, each # 16 S.W.G. diameter, .060 square inches total sectional area
 Branch cables carrying 17.5 Amperes, comprised of 7 wires, each # 16 S.W.G. diameter, .022 square inches total sectional area
 Branch cables carrying 14.5 Amperes, comprised of 7 wires, each # 14 S.W.G. diameter, .042 square inches total sectional area
 Leads to lamps carrying 0.5 Amperes, comprised of 1 wires, each # 16 S.W.G. diameter, .0032 square inches total sectional area
 Cargo light cables carrying 2 Amperes, comprised of 1 wires, each # 16 S.W.G. diameter, .0032 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Rubber insulating tape, braided, in non-conduit; W.T. iron boxes; steam tight globes; Iron Cables in engine + cargo spaces.
 Joints in cables, how made, insulated, and protected Soldered, Rubber tape in W.T. iron 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 Iron Conduit - Non-Conduit, Conduit - & Moulding in Bridge Quarters

5.43 amp
 15-kw. 110 volts
 onboard dynamo

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 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. Iron Conduit

How are cables carried through decks Iron Conduit 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 W.T. Iron braces

Are any lamps fitted in ~~coal bunkers~~ 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 Stem tight globes in Cages

Where are the main switches and fuses for these lights fitted Engine Room 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 Two, and with an amperemeter one, fixed 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 Stem tight Globes - Iron Cages

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 [Signature] Electrical Engineers Date Dec 9, 1918
Assistant to the President

COMPASSES.

Distance between dynamo or electric motors and standard compass 318 ft

Distance between dynamo or electric motors and steering compass 315 ft

The nearest cables to the compasses are as follows:—

A cable carrying <u>1/2</u> Amperes	<u>4</u> feet from standard compass	<u>2</u> feet from steering compass
A cable carrying <u>1 1/2</u> Amperes	<u>7</u> feet from standard compass	<u>4</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.

Newport News Shipbuilding & Dry Dock Co.,

By [Signature] Builder's Signature. Date Dec 9, 1918
Assistant to the President

GENERAL REMARKS.

The installation has been fitted under special Survey; the workmanship & protection are good, and render the vessel eligible in my opinion, to be the record "Electric Light" in the Register Book—

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

YK 7/1/19
[Signature]
 Elec. dt.

[Signature]
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute

New York DEC 17 1918

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

