

Rpt. 13.

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 147

Port of CLEVELAND, OHIO. Date of First Survey 9. 2. 18 Date of Last Survey 19. 4. 18 No. of Visits 7
 No. in Reg. Book on the Iron or Steel S.S. Lake Jessup Port belonging to A. Rein
 Built at A. Rein Ohio By whom The American Shipley & Co When built 1915
 Owners U.S. Shipping Board Emergency Fleet Corp. Address Washington.
 Yard No. 727 Electric Light Installation fitted by The American Shipley & Co When fitted 1918

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Four Pole Dynamo direct connected to Reupurposing Engine

Capacity of Dynamo 60 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 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Two in Bridge Deck. 5 Circuits each
One in Prop Space 5 Circuits

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 Yes

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

Total number of lights provided for 126 - 25 Wtts arranged in the following groups:-
4 - 60 -

| | | | |
|------------------------|--------------------------------|---|---------|
| A Bridge Space | lights each of <u>25 Wtts</u> | candle power requiring a total current of <u>12.5</u> | Amperes |
| B Prop Space | lights each of <u>25</u> | candle power requiring a total current of <u>3.4</u> | Amperes |
| C Fore Space | lights each of <u>25</u> | candle power requiring a total current of <u>1.5</u> | Amperes |
| D Midy. Space | lights each of <u>25</u> | candle power requiring a total current of <u>7.3</u> | Amperes |
| E White Light | lights each of <u>25</u> | candle power requiring a total current of <u>3.6</u> | Amperes |
| 2 Mast head light with | 1 lamps each of <u>60 Wtts</u> | candle power requiring a total current of <u>1.2</u> | Amperes |
| 2 Side light with | 1 lamps each of <u>60</u> | candle power requiring a total current of <u>1.2</u> | Amperes |

Above Cargo lights of as stated candle power, whether incandescent or arc lights Incandescent

If arc lights, what protection is provided against fire, sparks, &c. Incandescent. One 35 amp Search Light fitted Top of Pilot House. a independent Circuit. Window fitted with.

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

DESCRIPTION OF CABLES.

CAPACITY.

| | |
|-----------------------------|--|
| Main cable carrying | <u>70</u> Amperes, comprised of <u>7</u> wires, each <u>12</u> S.W.G. diameter, <u>41763</u> square inches total sectional area |
| Branch cables carrying | <u>50</u> Amperes, comprised of <u>7</u> wires, each <u>14</u> S.W.G. diameter, <u>26250</u> square inches total sectional area |
| Branch cables carrying | <u>25</u> Amperes, comprised of <u>7</u> wires, each <u>18</u> S.W.G. diameter, <u>10382</u> square inches total sectional area |
| Leads to lamps carrying | <u>15</u> Amperes, comprised of <u>1</u> wires, each <u>14</u> S.W.G. diameter, <u>4107</u> square inches total sectional area |
| Cargo light cables carrying | <u>13</u> Amperes, comprised of <u>37</u> wires, each <u>30</u> S.W.G. diameter, <u>37157</u> square inches total sectional area |

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Vulcanized Rubber, double insulated. To specification and tests of National Board of Fire Underwriters.

Joints in cables, how made, insulated, and protected Soldered, Rubberized and Taped

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 Casings*

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

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

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

How are cables carried through beams *Steel Casings* through bulkheads, &c. *W. T. fittings* ✓

How are cables carried through decks *Water tight fittings* ✓

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 *Steel casings secured there & clipped to each beam & clasp of damage*

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 *Plug Boxes*

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 *Eng. Room*

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.

Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass *About 50 ft*

Distance between dynamo or electric motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying *25* Amperes *5* feet from standard compass *5* feet from steering compass

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Have the compasses been adjusted with and without the electric installation at work at full power *Have been adjusted but not yet adjusted*

The maximum deviation due to electric currents, etc., was found to be *0* degrees on *0* course in the case of the

standard compass and *0* degrees on *0* course in the case of the steering compass.

The American Ship Bldg Co. Builder's Signature. Date

GENERAL REMARKS.

The above installation has been fitted in a satisfactory manner. The materials and workmanship employed, so far as can be seen, are sound and good.

It is submitted that this vessel is eligible for THE RECORD. Elec. light. H.W. 6/6/18.

M. Lane

Surveyor to Lloyd's Register of Shipping.

Committee's Minute *Elec. light*