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REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 20539

Port of *New York* Date of First Survey *6 April/21* Date of Last Survey *7 July/21* No. of Visits *12*
 No. in on the *Iron or Steel Screw Oil Tanker VICTOLITE* Port belonging to *Victoria. B.C.*
 Reg. Book Built at *Kearny, New Jersey* By whom *Federal Ship Building Co* When built *1921*
 Owners *Standard Oil Company of New Jersey* Owners' Address *26 Broadway, New York*
 Yard No. *49* Electric Light Installation fitted by *Federal Ship Building Co* When fitted *1921*

DESCRIPTION OF DYNAMOS, ENGINES, ETC. *2-20 K.W. 110/125 Volts. multipolar flat compound wound generators each direct connected to a 9x7" Vertical Steam reciprocating engine having automatic cut off & forced lubrication.*
10 K.W. 115 Volt Multipolar flat compound wound generator direct connected to a 4 cycle 4 cylinder gasolene engine

Capacity of Dynamos *182 MAIN Amperes at 115 Volts, whether continuous or alternating current CONTINUOUS.*
91 AUX.

Where is Dynamo fixed *ENGINE ROOM ON DYNAMO FLAT* Whether single or double wire system is used *DOUBLE*

Position of Main Switch Board *ON DYNAMO FLAT* having switches to groups *(5) A.B.C.D.E.* of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each *+ auxiliary generator 1 Auxiliary Switchboard located in Emer Gen room in Forecastle. 3 lighting distribution panels, 2 having 12 switches each + 1 having 4 switches. 1 Main panel having 8 switches for distribution, located on saloon deck.*

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 *NO WIRE FUSES.*

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases *YES.*

Total number of lights provided for *380* arranged in the following groups:—

| | lights each of | WATTS | candle power requiring a total current of | Amperes |
|--|----------------|-----------|---|----------------|
| A <i>134</i> | <i>50</i> | <i>50</i> | <i>61</i> | |
| B <i>42</i> | <i>50</i> | <i>50</i> | <i>19.2</i> | |
| C <i>12</i> | <i>50</i> | <i>50</i> | <i>5.5</i> | |
| C <i>22</i> | <i>50</i> | <i>50</i> | <i>10.0</i> | |
| D <i>13</i> | <i>50</i> | <i>50</i> | <i>5.9</i> | |
| D <i>48</i> | <i>50</i> | <i>50</i> | <i>21.8</i> | |
| E <i>99</i> | <i>50</i> | <i>50</i> | <i>40.45</i> | |
| <i>2</i> Mast head light with <i>2</i> lamps each of <i>32</i> | | | <i>4.0</i> | <i>Amperes</i> |
| <i>2</i> Side light with <i>2</i> lamps each of <i>32</i> | | | <i>4.0</i> | <i>Amperes</i> |

3 Cargo lights of *500 WATTS* candle power, whether incandescent or arc lights *INCANDESCENT.*

10 additional lights for signalling & lighting If arc lights, what protection is provided against fire, sparks, &c. *NO ARC LIGHTS.*

Where are the switches controlling the masthead and side lights placed *On Tell tale panel in pilot house.*

DESCRIPTION OF CABLES.

| | Amperes, comprised of | wires, each | A.W.G. diameter, | SQ. INCHES total sectional area |
|---|-----------------------|-------------|------------------|---------------------------------|
| Main cable carrying <i>175</i> Amperes, comprised of <i>2</i> wires, each <i>#4</i> A.W.G. diameter, <i>211.000</i> square inches | | | | |
| Branch cables carrying <i>61.00</i> Amperes, comprised of <i>2</i> wires, each <i>#2</i> A.W.G. diameter, <i>133.100</i> square inches | | | | |
| Branch cables carrying <i>40.45</i> Amperes, comprised of <i>2</i> wires, each <i>#4</i> A.W.G. diameter, <i>300.000</i> square inches | | | | |
| Branch cables carrying <i>19.2</i> Amperes, comprised of <i>2</i> wires, each <i>#4</i> A.W.G. diameter, <i>41.740</i> square inches | | | | |
| Leads to lamps carrying <i>10.0</i> Amperes, comprised of <i>2</i> wires, each <i>#4</i> A.W.G. diameter, <i>41.740</i> square inches | | | | |
| Cargo light cables carrying <i>1/2</i> Amperes, comprised of <i>2</i> wires, each <i>#14</i> A.W.G. diameter, <i>4.107</i> square inches | | | | |
| Cargo light cables carrying <i>4.55</i> Amperes, comprised of <i>2</i> wires, each <i>#14</i> A.W.G. diameter, <i>4.107</i> square inches | | | | |

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Rubber covered. double braided wires pulled in rigid iron conduit. galvanised

Joints in cables, how made, insulated, and protected *Soldered joints, covered with rubber insulation & friction tape. Joints made with a non-corrosive flux.*

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 *Through rigid iron conduit with additional protection where required*



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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 is made watertight**

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

What special protection has been provided for the cables near boiler casings **Asbestos covered wire**

What special protection has been provided for the cables in engine room **In iron conduit**

How are cables carried through beams **In iron conduit** through bulkheads, &c. **In conduit made watertight**

How are cables carried through decks **In conduit made watertight with locknuts & washers & canvas**

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 **By conduit**

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 **With wire guards**

Where are the main switches and fuses for these lights fitted **In tween deck passage**

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 **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 **Vapor proof globes with wire guards**

The copper used is guaranteed to have a conductivity of not less than that of the **American Institution of Electrical Engineers** 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 **500** megohms per **1000 FT** 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.

J. H. Osborne

Electrical Engineers

Date *July 11, 1921*

COMPASSES.

Distance between dynamo or electric motors and standard compass **330 feet Aft or 100 ft Forward**

Distance between dynamo or electric motors and steering compass **60 ft**

The nearest cables to the compasses are as follows:—

| A cable carrying | Amperes | feet from standard compass | feet from steering compass |
|------------------|----------|----------------------------|----------------------------|
| 1/2 | 5 | 8 | |
| A cable carrying | Amperes | feet from standard compass | 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.

The Federal Shipbuilding Co., *W. C. Smith, Ch. Eng.* Builder's Signature. Date

GENERAL REMARKS.

The above installation has been fitted on board the Vessel under Special Survey. The materials & workmanship so far as can be seen are sound and good and proved satisfactory under test.

Special Survey Fee = \$275.00

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

J. Hockhart

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

New York JUL 19 1921

Elect Light



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