

REPORT ON ELECTRIC LIGHTING INSTALLATION. No.

Port of Seattle Wash USA Date of First Survey Dec 16-1919 Date of Last Survey January 30-1920 No. of Visits 8
Built on the Iron or Steel Screw Steamer "ROBIN GRAY" Port belonging to San Francisco
Book Entry Built at Seattle By whom Skinner & Eddy Corp. When built 1920
Owners Robin Line Steamship Co. (D.E. Skinner Tug) Owners' Address L.C. Smith Building Seattle Wash USA
No. C-75 Electric Light Installation fitted by Skinner & Eddy Corporation When fitted 1920

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two Dynamos 15 KW each. Compound wound, direct connected to single reciprocating steam engines
Capacity of Dynamo 136 Amperes at 115 Volts, whether continuous or alternating current Continuous
Where is Dynamo fixed Engine Room platform Whether single or double wire system is used double
Position of Main Switch Board Beside Dynamos having switches to groups A.B.C.D.E of lights, &c., as below
Positions of auxiliary switch boards and numbers of switches on each Engine room 10, aft deck house 10, Midship house passage portside 4 and starboard passage 6. Forward deck house 10. Crews quarters aft 8.
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
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.
Are the fuses of non-oxidizable metal yes and constructed to fuse at an excess of 25 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 —
Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for		arranged in the following groups:—	
<u>78</u>	lights each of <u>32</u>	candle power requiring a total current of <u>26.5</u>	Amperes
<u>92</u>	lights each of <u>32</u>	candle power requiring a total current of <u>31.2</u>	Amperes
<u>63</u>	lights each of <u>32</u>	candle power requiring a total current of <u>21.0</u>	Amperes
<u>93</u>	lights each of <u>32</u>	candle power requiring a total current of <u>31.2</u>	Amperes
<u>66</u>	lights each of <u>32</u>	candle power requiring a total current of <u>22.6</u>	Amperes
<u>1</u>	Mast head light with <u>2</u> lamps each of <u>32</u>	candle power requiring a total current of <u>.75</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>.75</u>	Amperes
<u>25</u>	Cargo lights of <u>4 light clusters 128</u>	candle power, whether incandescent or arc lights <u>Incandescent</u>	

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

Where are the switches controlling the masthead and side lights placed Wheel house front of Chart room

DESCRIPTION OF CABLES.

in cable carrying <u>136</u> Amperes, comprised of <u>19</u> wires, each # <u>11</u>	<u>B&S</u> S.W.G. diameter, <u>.12350</u> square inches total sectional area
inch cables carrying <u>26.5</u> Amperes, comprised of <u>7</u> wires, each # <u>14</u>	<u>B&S</u> S.W.G. diameter, <u>.02247</u> square inches total sectional area
inch cables carrying <u>31.2</u> Amperes, comprised of <u>7</u> wires, each # <u>14</u>	<u>B&S</u> S.W.G. diameter, <u>.02247</u> square inches total sectional area
ds to lamps carrying <u>21</u> Amperes, comprised of <u>7</u> wires, each # <u>16</u>	<u>B&S</u> S.W.G. diameter, <u>.01428</u> square inches total sectional area
go light cables carrying <u>2</u> Amperes, comprised of <u>26</u> wires, each # <u>30</u>	<u>B&S</u> S.W.G. diameter, <u>.00204</u> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

National Electric Code Standard, double braid.

Wires in cables, how made, insulated, and protected Soldered, bound with rubber and friction tape and painted with waterproof paint

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 Metal conduits.

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 Metal Conduits

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

What special protection has been provided for the cables near boiler casings Metal Conduits

What special protection has been provided for the cables in engine room Metal Conduits

How are cables carried through beams Metal Conduits through bulkheads, &c. Water tight fittings

How are cables carried through decks Water tight 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 Metal Conduits

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 —

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 to 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.

Skinner & Eddy Corporation
by C. N. McCallum, Ch. Engr. Electrical Engineers Date Feb. 5-1920

COMPASSES.

Distance between dynamo or electric motors and standard compass 100 feet

Distance between dynamo or electric motors and steering compass 100 feet

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>3</u>	<u>10</u>	<u>5</u>	<u>5</u>
<u>4</u>	<u>6</u>	<u>6</u>	<u>6</u>
<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

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

Skinner & Eddy Corporation
by C. N. McCallum, Ch. Engr. Builder's Signature. Date Feb. 5-1920

GENERAL REMARKS.

The Electric Lighting Installation of good quality and workmanship tested under working conditions and found satisfactory. Eligible in my opinion, to be noted in the Register Book.

It is submitted that this vessel is eligible for THE RECORD ELEC. LIGHT 10/3/20

James Fowler
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

New York FEB 17 1920



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