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REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 577

Port of Portland, Oregon Date of First Survey Sept. 4 '19 Date of Last Survey Nov. 3 '19 No. of Visits 5
 No. in on the ~~INDEX SEA~~ Wood Motor Vessel "PARTHIA" Port belonging to Portland, Oregon
 Reg. Book ex "AVANCE"
 Built at Linnnton, Oregon By whom Columbia Engineering Works When built 1919
 Owners Lars Christensen formerly Owners' Address Sandefjord, Norway
Chr. Christensen, Jr., Inc.
 Yard No. 14 Electric Light Installation fitted by Fred H. Kaltz When fitted 1919

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One K.W. Gasolene set by the Delco Electrical Co. of Dayton, Ohio, used in connection with storage batteries and one Aux. Generator 3/4 K.W. 32 V. 18 Amp. Robins & Meyers, Springfield, Ohio.
 Capacity of Dynamo 25 Amperes at 32 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 four of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Engine Room 6, Cabin 13, Fwd. 5, Side Lights 1.

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 10 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 43 arranged in the following groups:—

A	<u>Cabin 13</u> lights each of	<u>25 W 20</u> candle power requiring a total current of	<u>10</u> Amperes
B	<u>6</u> lights each of	<u>25 W 20</u> candle power requiring a total current of	<u>5</u> Amperes
C	<u>5</u> lights each of	<u>25 W 20</u> candle power requiring a total current of	<u>5</u> Amperes
D	<u>5</u> lights each of	<u>25 W 20</u> candle power requiring a total current of	<u>5</u> Amperes
E	lights each of	candle power requiring a total current of	Amperes
	<u>1</u> Mast head light with <u>1</u> lamps each of	candle power requiring a total current of	Amperes
	<u>2</u> Side light with <u>1</u> lamps each of	<u>25</u> candle power requiring a total current of	Amperes
	Cargo lights of	candle power, whether incandescent or arc lights <u>incandescent</u>	

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

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

DESCRIPTION OF CABLES.

	Amperes, comprised of	wires, each	No.	S.W.G. diameter,	C.M.	square inches total sectional area
Main cable carrying		<u>2</u>	<u>No. 8</u>	<u>16,510</u>	<u>16,510</u>	<u>square inches</u>
Branch cables carrying		<u>2</u>	<u>" 12</u>	<u>6,530</u>	<u>6,530</u>	<u>square inches</u>
Branch cables carrying		wires, each		S.W.G. diameter,		square inches total sectional area
Leads to lamps carrying		wires, each		S.W.G. diameter,		square inches total sectional area
Cargo light cables carrying		wires, each		S.W.G. diameter,		square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Rubber covered, double braided - National Electric Code Standard.

Joints in cables, how made, insulated, and protected

Spliced, soldered and taped. Splicing compound, friction tape and P.B. electric paint.

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances 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

Are there any joints in or branches from the cable leading from dynamo to main switch board

How are the cables led through the ship, and how protected Conduit No. 12



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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 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 ✓

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. Metal Conduits

How are cables carried through decks Metal Conduits

Are any cables run through coal bunkers No or cargo spaces No or spaces which may be used for carrying cargo, stores, or baggage No

If so, how are they protected ✓

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 ✓

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 Engine 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 1000 megohms per 1000 ft. 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 35 ft.

Distance between dynamo or electric motors and steering compass 35 ft.

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
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 Yes

The maximum deviation due to electric currents, etc., was found to be Nil degrees on Nil course in the case of the standard compass and Nil degrees on Nil course in the case of the steering compass.

Builder's Signature.

Date

GENERAL REMARKS.

The above installation has been made in accordance with the Rules. The Material and workmanship are good.

J. A. Mates

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Elec Lt

New York

OCT 26 1920

FRI FEB 11 1921

WED 30 MAR 1921

FRI APR 22 1921

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