

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 543

Port of Seattle Wash. Date of First Survey July 24/17 Date of Last Survey Feb 17/18 No. of Visits 6  
 No. in Reg. Book on the Iron or Steel Wood Gun Screw Sh. Palau ant Port belonging to New York  
 Built at Aberdeen Wash. By whom Cray Harbor E.B. Co. When built 1917  
 Owners Klepp and Osterold Co. Owners' Address 11 Broadway New York City N.Y.  
 Yard No. 6 Electric Light Installation fitted by Builders When fitted 1917

### DESCRIPTION OF DYNAMO, ENGINE, ETC.

5 K.W. Fairbanks Morse direct-connected to a 10 H.P. Hot-ball Engine  
Gas Fairbanks Morse

Capacity of Dynamo 5 K.W. Amperes at 110 V Volts, whether continuous or alternating current A.C.  
 Where is Dynamo fixed Engine room Whether single or double wire system is used  
 Position of Main Switch Board Engine room having switches to groups 6 circuits of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each None

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 \_\_\_\_\_ per cent over the normal current

Are all fuses fitted in easily accessible positions on switch 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 106 arranged in the following groups:—

A Cabin	57	lights each of	25 watt	candle power requiring a total current of	15	Amperes
B Forecastle	12	lights each of	" "	candle power requiring a total current of	3	Amperes
C Wheel House	12	lights each of	" "	candle power requiring a total current of	3	Amperes
D Engine room	25	lights each of	" "	candle power requiring a total current of	7	Amperes
E Mech. Telegraph		lights each of	" "	candle power requiring a total current of	1/2	Amperes
1 Mast head light with	1	lamps each of	40 watt	candle power requiring a total current of	1 1/2	Amperes
2 Side light with	1	lamps each of	40 watt	candle power requiring a total current of		
4		Cargo lights of	cluster 40 watt	candle power, whether incandescent or arc lights		Portable

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

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

### DESCRIPTION OF CABLES.

Main cable carrying	50	Amperes, comprised of	# 6	wires, each # 12	S.W.G. diameter, 26250	square inches total sectional area
A Branch cables carrying	13	Amperes, comprised of	12	wires, each # 2	S.W.G. diameter, 6524	square inches total sectional area
B Branch cables carrying	4	Amperes, comprised of	12	wires, each # 2	S.W.G. diameter, 6524	square inches total sectional area
C Leads to lamps carrying	2	Amperes, comprised of	14	wires, each # 12	S.W.G. diameter, 4106	square inches total sectional area
D " " " " " " " "	7	Amperes, comprised of	# 14	wires, each # 12	S.W.G. diameter, 4106	square inches total sectional area

### DESCRIPTION OF INSULATION, PROTECTION, ETC.

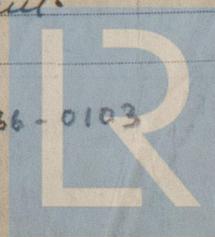
Rubber + double braided

Joints in cables, how made, insulated, and protected Soldered, rubber and friction tape

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

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 Run in galv. conduit



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W966-0103

**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 Run in steam light fixtures and lead armoured cable

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Covered with asbestos

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

What special protection has been provided for the cables in engine room Run in conduit

How are cables carried through beams Conduit with lock nuts through bulkheads, &c. conduit with packed glands

How are cables carried through decks Conduit with lock nuts & washers

Are any cables run through coal bunkers ✓ or cargo spaces yes or spaces which may be used for carrying cargo, stores, or baggage yes

If so, how are they protected Galv. conduit

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 Attached to recepts

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 switch board

**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 yes steam light fixtures

How are the lamps specially protected in places liable to the accumulation of vapour or gas Steam light-globes

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.

L. F. Wynman

Electrical Engineers

Date 4/5/18

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 25-41-

Distance between dynamo or electric motors and steering compass 25- "

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>5</u>	<u>5</u>	<u>8</u>	<u>8</u>
<u>15-</u>	<u>20</u>	<u>27</u>	<u>27</u>
<u>7</u>	<u>20-</u>	<u>25-</u>	<u>25-</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                      course in the case of the standard compass and                      degrees on                      course in the case of the steering compass.

Gramp Harbor Shipbuilding Co.  
M. K. Mearns  
Plaster Builder

Builder's Signature.

Date

**GENERAL REMARKS.**

The electric lighting installation of good quality & workmanship tested under working condition and found satisfactory eligible in my opinion to be noted electric light in the Register Book

It is submitted that this vessel is eligible for THE RECORD. Elec. light. JWD. 14/5/18.

L. Nosworthy  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute Elec. Light

TUE. 13 MAY. 1919  
FRI. 7 NOV. 1919

TUE. 6 JAN. 1920



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