

TUE 27 MAY 1919

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 720.

Port of *Vancouver B.C.* Date of First Survey *Jan 3/19* Date of Last Survey *March 1919* No. of Visits *15*  
 No. in Reg. Book *on the Iron or Steel Wood S. S. Antonio* Port belonging to *Andros, Greece*  
 Built at *Port Coquitlam B.C.* By whom *Pacific Construction Co* When built *1919*  
 Owners *Nicolas Gallanos* Owners' Address *New York, U.S.A.*  
 Yard No. *23* Electric Light Installation fitted by *Mundy Rowland & Co* When fitted *1919*

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

*Compound Wound Generator built by Westinghouse Electric Co. direct connected to Steam Turbine of 14000 H.P.M.*

Capacity of Dynamo *80* Amperes at *125* Volts, whether continuous or alternating current *Continuous*

Where is Dynamo fixed *Starboard Engine Room* Whether single or double wire system is used *Double*

Position of Main Switch Board *Near Generator* having switches to groups *Eight* of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each *Passage to Galley with 4 circuits*

*Forecastle with two circuits, Starboard Passage to officers quarters 4 circuits, Engine Room near Switchboard, with three 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

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 *None used*

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:—

A <i>Yacht</i> , 16 lights each of 40 Watts - 32 candle power requiring a total current of	6.40	Amperes
B <i>Officers quarters</i> , 36 lights each of 40 Watts - 32 candle power requiring a total current of	14.40	Amperes
C <i>Engine room quarters</i> , 43 lights each of 40 Watts, 32, candle power requiring a total current of	17.20	Amperes
D <i>Cargo</i> , 32 lights each of 60 Watts, 50 candle power requiring a total current of	19.20	Amperes
E <i>Engine Room</i> , 30 lights each of 60 Watts, 50, candle power requiring a total current of	18.00	Amperes
<i>one</i> , Mast head light with <i>one</i> lamps each of 60 Watts, 50, candle power requiring a total current of	.6	Amperes
<i>2</i> Side light with <i>one</i> lamps each of 60 Watts, 50, candle power requiring a total current of	.6	Amperes
<i>8</i> Cargo lights of 4 light each, 200, candle power, whether incandescent or <del>arc</del> lights <i>Incandescent</i>		

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

Where are the switches controlling the masthead and side lights placed *abaft Steering Wheel*

## DESCRIPTION OF CABLES.

Main cable carrying	80 Amperes, comprised of	7 wires, each <sup>12 BT</sup> "0808" S.W.G. diameter, <sup>00513</sup> square inches total sectional area
Branch cables carrying	10 Amperes, comprised of	2 wires, each <sup>10 BT</sup> "1018" S.W.G. diameter, <sup>008153</sup> square inches total sectional area
Branch cables carrying	6 Amperes, comprised of	wires, each <sup>14 BT</sup> "0640" S.W.G. diameter, <sup>003225</sup> square inches total sectional area
Leads to lamps carrying	6 Amperes, comprised of	wires, each <sup>14 BT</sup> "0640" S.W.G. diameter, <sup>003225</sup> square inches total sectional area
Cargo light cables carrying	24 Amperes, comprised of	2 wires, each <sup>16 BT</sup> "0508" S.W.G. diameter, <sup>002028</sup> square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

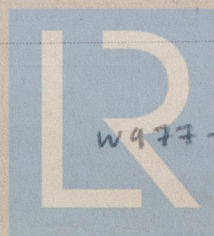
*All Wires exposed to mechanical injury enclosed in Galvanized Steel conduit while those in officers quarters are lead covered.*

Joints in cables, how made, insulated, and protected *Regulation splice soldered and Taped with Both Rubber & friction tape to same resistance as original insulation*

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 *by Galvanized Steel conduit*



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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. Enclosed in Galvanized conduit and supplied with Waterproof fittings.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat. Avoided hot places.

What special protection has been provided for the cables near boiler casings. Conduit so run as to avoid excessive heat.

What special protection has been provided for the cables in engine room. Conduit so run as to avoid excessive heat.

How are cables carried through beams. In Conduit through bulkheads, &c. Metallic Slipping Box.

How are cables carried through decks. By Deck tubes with rubber gaskets.

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

If so, how are they protected. Run in Steel 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. No.

Cargo light cables, whether portable or permanently fixed. Portable How fixed. With Watertight Plugs.

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. Yes.

Is the installation supplied with a voltmeter. Yes. and with an amperometer. Yes. fixed 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.

Mundy Rowland & Co.

per R.S.C.

Electrical Engineers

Date Feb 25<sup>th</sup> 1919

COMPASSES.

Distance between dynamo or electric motors and standard compass. 90 feet.

Distance between dynamo or electric motors and steering compass. 90 feet.

The nearest cables to the compasses are as follows:—

A cable carrying  $\frac{1}{2}$  Amperes 10 feet from standard compass 10 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 none degrees on any course in the case of the standard compass and ✓ degrees on ✓ course in the case of the steering compass.

THE PACIFIC CONSTRUCTION CO., LTD.

W. Simpson

Builder's Signature.

Date March 7 1919

GENERAL REMARKS.

The Electric Light installation is of Good Quality and workmanship tested under working conditions and found Satisfactory. Eligible in my opinion to be noted in the Register Book. Electric Light. 3. 19. Geo. C. M. Gower

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. JUN. 3—1919



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