

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1651

Port of *Vancouver* Date of First Survey *June 21* Date of Last Survey *July 24* No. of Visits *8*  
 No. in *on the* Steel *M.V. MARPOLITE* Port belonging to *Vancouver*  
 Reg. Book *Built at* *N. Vancouver* By whom *Bunara Dry Dock Co* When built *1926.7.*  
 Owners *Imperial Oil Co.* Owners' Address *Vancouver* When fitted *1926.7.*  
 Yard No. *110* Electric Light Installation fitted by *J.C. Reston: Vancouver*

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

*A 3 kV. direct connected generator set. 3 HP single cyl. hot bulb Petter Engine*  
*A 1/2 KW do do Emergency do do 2 HP do do do do*  
 Capacity of Dynamo *27.5* Amperes at *110.* Volts, whether continuous or alternating current *Continuous*  
 Where is Dynamo fixed *in Engine room. lower platform* Whether single or double wire system is used *double.*  
 Position of Main Switch Board *Eng. room - near dynamo* having switches to groups *Six.* of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each *main switch board only - fitted with one main*  
*switch. 2 switches for Eng room + deck and 4 switches for compass light, navigation lights,*  
*upper cabins, lower cabins*  
 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 *yes*  
 the fuses of non-oxidizable metal *yes* and constructed to fuse at an excess of *107.* per cent over the normal current  
 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 wires.*  
 all switches and fuses constructed of incombustible materials and fitted on incombustible bases *yes*  
 number of lights provided for *36.* arranged in the following groups:—  

Light	Number	Each of	Candle power	Requiring a total current of	Amperes
Search Light	1	lights each of	500		4
Navigation Lights	4	lights each of	32		2
Eng room	7	lights each of	32		5 1/2
Upper Cabins	17	lights each of	50		8 1/2
Lower Cabins	17	lights each of	50		15
Eng room	3	lights each of	50		1 1/2
Mast head light with	1	lamps each of	32		1
Side light with	2	lamps each of	32		1/2
Cargo lights of	1		50		1/2

 candle power, whether incandescent or *no wires.*  
 lights, what protection is provided against fire, sparks, &c. *no wires.*

are the switches controlling the masthead and side lights placed *in hull house.*

## DESCRIPTION OF CABLES.

Cable carrying	Amperes, comprised of	Wires, each	S.W.G. diameter,	square inches total sectional area
30	7	2 1/2	S.W.G. diameter,	square inches total sectional area
15	3	20	S.W.G. diameter,	square inches total sectional area
15	3	20	S.W.G. diameter,	square inches total sectional area
15	3	20	S.W.G. diameter,	square inches total sectional area
5	3	20	S.W.G. diameter,	square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

*when covered guided this in Conduit throughout. Except when*  
*exposed to weather when wires are lead covered.*

in cables, how made, insulated, and protected *Soldered. two coats of rubber tape and*  
*covering of friction tape*

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.*  
 where any joints in or branches from the cable leading from dynamo to main switch board *no*  
 are the cables led through the ship, and how protected *yes light Conduit piping throughout.*



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 *Blut Conduit & gas proof fittings*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *conduit.*

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

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

How are cables carried through beams *none.* through bulkheads, &c. *metal light fittings*

How are cables carried through decks *metal light duct tubes*

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

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 *✓*

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 *metal & gas proof receptacle.*

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 *on 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 *no.*

How are the lamps specially protected in places liable to the accumulation of vapour or gas *vapour proof fittings.*

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.

RESTON ELECTRIC CO.

Electrical Engineers

Date *July 30. 1926.*

COMPASSES.

Distance between dynamo or electric motors and standard compass *45 feet*

Distance between dynamo or electric motors and steering compass *45 feet*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>15</i>	<i>6</i>		
<i>✓</i>	<i>✓</i>		
<i>✓</i>	<i>✓</i>		

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 *2 1/2* degrees on *no* course in the case of the standard compass and *no* degrees on *no* course in the case of the steering compass.

*Burnard Dry Dock Co. Ltd. Per W. Power* Builder's Signature. Date *July 28<sup>th</sup> 1926.*

GENERAL REMARKS.

*This installation has been fitted under survey, and according to rules. The material & workmanship are good, and a satisfactory test under full & varying loads has been carried out.*

*£50.00*

*Elec. Light*

*A. Scott*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 20 AUG 1926



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