

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No.

Port of *(Spencer) London* Date of First Survey *S.S. Port Lamine* Date of Last Survey *Cardiff* No. of Visits  
 No. in *on the Iron or Steel* Reg. Book *10* Built at *Louisa* By whom *John Chambers Ltd* Port belonging to *Cardiff* When built *1921*  
 Owners *Messrs R. McNeil & Co Ltd* Owners' Address *Cardiff* Yard No. *503* Electric Light Installation fitted by *Chippendale & Co Ltd* When fitted *1921*

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

*Electromotor, Openshaw, Manchester. 1 K.W.*  
*Compound Wound 700 R.P.M.*

Capacity of Dynamo *10* Amperes at *100* Volts, whether continuous or alternating current *Continuous*  
 Where is Dynamo fixed *In Engine room.* Whether single or double wire system is used *Double*  
 Position of Main Switch Board *Engine room.* having switches to groups *A, B, C, D.* of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each *Acc. 2. Panty 2. Eng room 2.*

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 *50%* 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 *Yes*

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases *Yes*

Total number of lights provided for *25* arranged in the following groups:—

A	4 accommodation lights each of	30	candle power requiring a total current of	1.2	Amperes
B	5 " lights each of	30	candle power requiring a total current of	1.5	Amperes
C	7 " lights each of	30	candle power requiring a total current of	2.1	Amperes
D	4 Bulk & Eng room lights each of	30	candle power requiring a total current of	1.2	Amperes
E	lights each of		candle power requiring a total current of		Amperes
1	Mast head light with 1 lamps each of	30	candle power requiring a total current of	.3	Amperes
2	Side light with 1 lamps each of	30	candle power requiring a total current of	.6	Amperes
2	Cargo lights of	600	candle power, whether incandescent or <del>any light</del>	6 amps	

If arc lights, what protection is provided against fire, sparks, &c. *No arc lights*

Where are the switches controlling the masthead and side lights placed *Whelhouse*

## DESCRIPTION OF CABLES.

Main cable carrying	<i>Max 10</i> Amperes, comprised of	<i>7</i> wires, each	<i>18</i> S.W.G. diameter,	<i>.01254</i> square inches total sectional area
Branch cables carrying	<i>6</i> Amperes, comprised of	<i>7</i> wires, each	<i>20</i> S.W.G. diameter,	<i>.00705</i> square inches total sectional area
Branch cables carrying	<i>-</i> Amperes, comprised of	<i>-</i> wires, each	<i>18</i> S.W.G. diameter,	<i>-</i> square inches total sectional area
Leads to lamps carrying	<i>1.8</i> Amperes, comprised of	<i>1</i> wires, each	<i>18</i> S.W.G. diameter,	<i>.0018</i> square inches total sectional area
Cargo light cables carrying	<i>3</i> Amperes, comprised of	<i>3</i> wires, each	<i>20</i> S.W.G. diameter,	<i>.0030</i> square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

*600 meg. N.A. cable* *7/8, 3/4, 1 1/4 Steel covered conduit.*

Joints in cables, how made, insulated, and protected *None*

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 *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

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Galley not near same*

What special protection has been provided for the cables near boiler casings *Nearest point about 2 feet*

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

How are cables carried through beams *Sheet conduit* through bulkheads, &c. *T.W.T. fittings*

How are cables carried through decks *In conduit made watertight*

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

If so, how are they protected *Sheet conduit & protected by being run in angle of stringer*

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 *Main switch 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 *500* 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.

*W. Chipperfield*

Electrical Engineers

Date *18/3/21*

COMPASSES.

Distance between dynamo or electric motors and standard compass *50 to 60 feet*

Distance between dynamo or electric motors and steering compass *50 to 60 feet*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>3-0</i>	<i>10</i>	<i>14</i>	
<i>Flow return</i>			
<i>0-3</i>	<i>5</i>	<i>4</i>	

Have the compasses been adjusted with and without the electric installation at work at full power

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

*P. Babanovich*

Builder's Signature. Date *March 18 1921*

GENERAL REMARKS.

*This installation has been fitted in accordance with the Society's Rules. The materials & workmanship are sound and good. The installation was tried with full load for four hours, afterwards examined & found satisfactory.*

*It is submitted that this vessel is eligible for*

THE RECORD.

*See (minimum) 5:00 applied for 24/3/21*

*22/3/21*

*A. E. Lammie*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute *24/3/21*