

30 AUG 1930

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2179

Port of *Halifax N.S.* Date of First Survey *Dec 20th 1929* Date of Last Survey *July 22nd 1930* No. of Visits *30*
 No. in Reg. Book on the *Iron or Steel Ship* *"H.B. McLean"* Port belonging to *Ottawa*
 Built at *Halifax N.S.* By whom *Halifax Shipyards, Ltd.* When built *1920*
 Owners *Canadian Government* Owners' Address
 Yard No. *5* Electric Light Installation fitted by *Halifax Shipyards, Ltd.* When fitted *1930*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

6 Pole compound with 6 inter pole generator direct connected to steam compound engines. generator made by Messrs. Lawrence Scott & Co. Ltd. and engine by Messrs. Harland & Wolff Ltd. 30 H.P. and 1 emergency 7 H.P. oil driven generator (2 main 1 aux)

Capacity of Dynamo *273* Amperes at *110* Volts, whether continuous or alternating current *Continuous*

Where is Dynamo fixed *Engine room top platform* Whether single or double wire system is used *Double*

Position of Main Switch Board *Engine room top platform* having switches to groups *eight* of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each *fixed and connected to main switch board*

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 *234* arranged in the following groups:—

A *Engine room* *76* lights each of *40 watt* candle power requiring a total current of *38* Amperes

B *Forward accommodation* *80* lights each of *"* candle power requiring a total current of *40* Amperes

C *Aft* *42* lights each of *"* candle power requiring a total current of *21* Amperes

D *Right lights* *14* lights each of *"* candle power requiring a total current of *7* Amperes

E *Search light* lights each of *3.200* candle power requiring a total current of *100* Amperes

2 Mast head light with *1* lamps each of *50 watt* candle power requiring a total current of *1* Amperes

2 Side light with *1* lamps each of *"* candle power requiring a total current of *1* Amperes

3 *cluster* Cargo lights of *6 light red* " candle power, whether incandescent or are lights *incandescent*

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

Where are the switches controlling the masthead and side lights placed *Self-acting in wheel house*

DESCRIPTION OF CABLES.

Main cable carrying *210* Amperes, comprised of *2* single wires, each *B+S* S.W.G. diameter, *400.000* square inches total sectional area

Branch cables carrying *40* Amperes, comprised of *"* wires, each *4* S.W.G. diameter, *41.740* square inches total sectional area

Branch cables carrying *21* Amperes, comprised of *"* wires, each *4* S.W.G. diameter, *41.740* square inches total sectional area

Leads to lamps carrying *"* Amperes, comprised of *"* wires, each *"* S.W.G. diameter, *41.740* square inches total sectional area

Cargo light cables carrying *3* Amperes, comprised of *14* wires, each *14* S.W.G. diameter, *4.107* square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

All wires insulated with rubber, tape, lead and jute covered

Joints in cables, how made, insulated, and protected *No joints*

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 *No*

How are the cables led through the ship, and how protected *Armoured cable on Galv-iron trays. All cables through beams lead hided, passing through deck pipes with R.T. glands.*



Lloyd's Register
Foundation

1810-727808-027800

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 *Lead covered & armoured*

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

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

What special protection has been provided for the cables in engine room *Armoured cable*

How are cables carried through beams *Lead backed* through bulkheads, &c. *Piped and w.T. glands*

How are cables carried through decks *Deck pipes and w.T. glands*

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

If so, how are they protected *Armoured cable on wood runways*

Are any lamps fitted in ~~coal bunkers~~ or spaces which may at times be used for cargo, coals, or baggage *Yes*

If so, how are the lamp fittings and cable terminals specially protected *Water tight Well Glass and guard*

Where are the main switches and fuses for these lights fitted *Main deck*

If in the spaces, how are they specially protected *Water tight Well Glass & guard*

Are any switches or fuses fitted in bunkers *No*

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 *on main 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

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 *but 15* 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.

COMPASSES.

Distance between dynamo or electric motors and standard compass

130 ft

Distance between dynamo or electric motors and steering compass

125 ft

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>6</i>	<i>15</i>	<i>10</i>	
<i>100</i>	<i>15</i>	<i>10</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 *no* degrees on *the* course in the case of the standard compass and *no* degrees on *the* course in the case of the steering compass.

GENERAL REMARKS.

The electric light installation on this vessel has been fitted in accordance with the Rules and approved plans in a satisfactory manner. The materials and workmanship are good. The installation has been tested under full working conditions with satisfactory results.

Elec. Light
R. H. 2/9/30

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 19 SEP 1930

Elec. Light.



© 2020

Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.