

ON ELECTRIC LIGHTING INSTALLATION. No. 2254

Liverpool Date of First Survey *Sept 16th* Date of Last Survey *Sept 28th* No. of Visits *3*
 on the Iron or Steel *S.S. "Ravens Point"* Port belonging to *Liverpool*
 Built at *Garston* By whom *Messrs H. & C. Grayson Ltd* When built *1918*
 Owners *Sir John Esplan* Owners' Address
 Yard No. Electric Light Installation fitted by *Messrs Campbell & Isherwood Ltd* When fitted *1918*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Open, Vertical single cylinder type Engine direct to Compound wound, multipolar type dynamo, both mounted on cast iron baseplate

Capacity of Dynamo *50* Amperes at *100* Volts, whether continuous or alternating current *continuous*

Where is Dynamo fixed *Under Stores in Engine Room* Single wire system

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

Positions of auxiliary switch boards and numbers of switches on each *1-6 way in Engine room, 1-10 way with switches in Chart Room, remainder near respective groups of lights*

If cut outs 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 cut outs fitted to both flow and return wires or cables of all circuits including lamp circuits *—*

Are the cut outs of non-oxidizable metal *Yes* and constructed to fuse at an excess of *50* per cent over the normal current

Are all cut outs 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 cut-outs constructed of incombustible materials and fitted on incombustible bases *Yes*

Total number of lights provided for *Equivalent 125-16 CP* arranged in the following groups:—

A	<i>Saloon</i>	<i>11</i> lights each of	<i>16</i>	candle power requiring a total current of	<i>4</i>	Amperes
B	<i>Bridge</i>	<i>18</i> lights each of	<i>16</i>	candle power requiring a total current of	<i>8</i>	Amperes
C	<i>Forecastle Engineers</i>	<i>24</i> lights each of	<i>16</i>	candle power requiring a total current of	<i>10</i>	Amperes
	<i>Engine room</i>	<i>21</i> lights each of	<i>16</i>	candle power requiring a total current of	<i>8</i>	Amperes
	<i>Cargo</i>	<i>24</i> lights each of	<i>16</i>	candle power requiring a total current of	<i>12</i>	Amperes
	<i>12-150 watt lanterns</i>		<i>300</i>		<i>3</i>	
2	<i>Mast head light with</i>	<i>1</i> lamps each of	<i>16</i>	candle power requiring a total current of	<i>1</i>	Amperes
2	<i>Side light with</i>	<i>1</i> lamps each of	<i>16</i>	candle power requiring a total current of	<i>1</i>	Amperes

-6 light blusters & Cargo lights of *96* candle power, whether incandescent or arc lights *incandescent*

2 Cargo Lanterns *300*
If arc lights, what protection is provided against fire, sparks, &c. *None*

Where are the switches controlling the masthead and side lights placed *in Chart Room also on Navigating Bridge*

DESCRIPTION OF CABLES.

Main cable carrying *50* Amperes, comprised of *19* wires, each *14* L.S.G. diameter, *.093* square inches total sectional area

Branch cables carrying *10* Amperes, comprised of *7* wires, each *18* L.S.G. diameter, *.0125* square inches total sectional area

Branch cables carrying *20* Amperes, comprised of *7* wires, each *18* L.S.G. diameter, *.0125* square inches total sectional area

Leads to lamps carrying *1* Amperes, comprised of *3* wires, each *20* L.S.G. diameter, *.003* square inches total sectional area

Cargo light cables carrying *12* Amperes, comprised of *172* wires, each *38* L.S.G. diameter, *.005* square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

V. I. R. Laped braided & compounded, through Cargo spaces, Bunkers & Engine room & on deck carried in heavy gauge, galvanised screwed pipe

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

Are all the joints of cables thoroughly soldered, resin only having been used as a flux *No joints* 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 *in heavy gauge, galvanised, screwed pipe*

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 *cables run gauge, galvanised, screwed pipe*

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

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

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

How are cables carried through beams *Iron clips* ~~through bulkheads, &c.~~

How are cables carried through decks *in deck pipes watertight*

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

If so, how are they protected *by heavy gauge galvanised screwed pipe*

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 cut outs for these lights fitted *—*

If in the spaces, how are they specially protected *—*

Are any switches or cut outs fitted in bunkers *No*

Cargo light cables, whether portable or permanently fixed *Portable* How fixed *To Cargo Connection Boxes on deck*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *to carcass of dynamo*

How are the returns from the lamps connected to the hull *to brass Tapp pins tapped into beams*

Are all the joints with the hull in accessible positions *Yes*

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and cut-outs fitted in positions not liable to the accumulation of petroleum vapour or gas ☒

Are any switches, cut outs, 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 installation is *Yes* supplied with a voltmeter and *Yes* an amperemeter, fixed *on Main Switchboard*

The copper used is guaranteed to have a conductivity of *100* per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than *600* megohms statute mile after 24 hours' immersion in seawater.

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.

Campbell + Isherwood Ltd Electrical Engineers Date *Oct 8/18.*

COMPASSES.

Distance between dynamo or electric motors and standard compass *—*

Distance between dynamo or electric motors and steering compass *—*

The nearest cables to the compasses are as follows:—

A cable carrying	$\frac{1}{2}$	Amperes	<i>on</i>	feet from standard compass	<i>5</i>	feet from steering compass
A cable carrying	$\frac{1}{2}$	Amperes	<i>5</i>	feet from standard compass	<i>on</i>	feet from steering compass
A cable carrying	<i>3</i>	Amperes	<i>3</i>	feet from standard compass	<i>8</i>	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 *—* degrees on *—* course in the case of the standard compass and *—* degrees on *—* course in the case of the steering compass.

Builder's Signature. Date

GENERAL REMARKS.

This Elec. Light installation has been satisfactorily fitted & vessel is, in my opinion eligible for record in Register Book.

It is submitted that this vessel is eligible for THE RECORD. ELEC. LIGHT 25-10-18

J. B. Milton
Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

Electric Light.



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NOT TO WRITE ACROSS THIS MARGIN.

THE SURVEYORS