

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 27572

Admiral

Port of SUNDERLAND Date of First Survey 15 Apr Date of Last Survey 7 May 1919 No. of Visits 3  
 No. in Reg. Book on the Iron or Steel ADMIRAL HAMILTON Port belonging to London  
 Built at SUNDERLAND By whom JOHN PRIESTMAN & CO. When built 1919  
 Owners Byron Slack Owners' Address \_\_\_\_\_  
 Yard No. 281 Electric Light Installation fitted by J. S. Holmes & Co Newcastle When fitted 1919

### DESCRIPTION OF DYNAMO, ENGINE, ETC.

1- 6 1/2 x 6 Open Vertical Single Cylinder Engine coupled Direct to 1- 12 1/4 W Open Type Dynamo by J. S. Holmes & Co  
 Capacity of Dynamo 100 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 Near Dynamo having switches to groups A, B, C, D, E of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each 2- 3 way 10 Amp. Section Boxes in Steering Gear  
1- 3 way 5 amp. Section in Chart Room 1- 6 way 5 amp. Box in Wheelhouse 1- 3 way Box in Passage  
1- 3 way 5 amp. in Steering Gear 1- 6 way Box in Passage Off. 1- 6 way Box in Engine Room  
 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-oxidisable metal Yes and constructed to fuse at an excess of 100 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 118016 CP arranged in the following groups:—

Group	Number of lights	Watts each of	Watts each of	Candle power requiring a total current of	Amperes
A	<u>12</u>	<u>32</u>	<u>16</u>	<u>Approx 10.5</u>	<u>Amperes</u>
B	<u>51</u>	<u>16</u>	<u>16</u>	<u>15.5</u>	<u>Amperes</u>
C	<u>25</u>	<u>16</u>	<u>16</u>	<u>14</u>	<u>Amperes</u>
D	<u>30</u>	<u>16</u>	<u>16</u>	<u>16.8</u>	<u>Amperes</u>
E	<u>Miscellaneous Circuit</u>				<u>Amperes</u>
	<u>2 Mast head light with</u>	<u>1 lamps each of</u>	<u>32</u>	<u>224</u>	<u>Amperes</u>
	<u>2 Side light with</u>	<u>1 lamps each of</u>	<u>32</u>	<u>224</u>	<u>Amperes</u>
	<u>5 Cargo lights of</u>	<u>6 x 16</u>		<u>Incandescent or arc lights</u>	<u>Incandescent</u>

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

Where are the switches controlling the masthead and side lights placed In Wheelhouse

### DESCRIPTION OF CABLES.

Main cable carrying 100 Amperes, comprised of 19 wires, each 14 S.W.G. diameter, .094 square inches total sectional area  
 Branch cables carrying 15.5 Amperes, comprised of 4 wires, each 16 S.W.G. diameter, .082 square inches total sectional area  
 Branch cables carrying 14 Amperes, comprised of 4 wires, each 18 S.W.G. diameter, .072 square inches total sectional area  
 Leads to lamps carrying 56 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .078 square inches total sectional area  
 Cargo light cables carrying 336 Amperes, comprised of 3 wires, each 20 S.W.G. diameter, .003 square inches total sectional area

### DESCRIPTION OF INSULATION, PROTECTION, ETC.

All conductors are formed of HC Copper Tinned insulated with pure Para Rubber & Unicaused India Rubber Armoured with Galvanised Sheet Wire Taped & Braided overall  
 Joints in cables, how made, insulated, and protected None, Rooping In System Carried Out  
 Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances None 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 None  
 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 Cargo Spaces Armoured & Braided Clipped to under side of Deck In Engine Room Armoured & Braided Clipped to bulkheads In Accommodation Lead covered clipped up



**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 *Armoured & Braided*

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

What special protection has been provided for the cables near boiler casings \_\_\_\_\_

What special protection has been provided for the cables in engine room \_\_\_\_\_

How are cables carried through beams *Pushed with Lubric* through bulkheads, &c. *Stuffing Glands*

How are cables carried through decks *Lead in Iron Tubes & Lugs 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 *Yes*

If so, how are they protected *Armoured & Braided*

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 *W/ Plug socket connections*

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 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 *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.

*J. L. Holmes & Co* Electrical Engineers Date *May 16. 19.*

**COMPASSES.**

Distance between dynamo or electric motors and standard compass *Approx 85 ft*

Distance between dynamo or electric motors and steering compass *80 ft*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	Location	feet from standard compass	feet from steering compass
<i>.06</i>		<i>Inside</i>	<i>Inside</i>	<i>feet from steering compass</i>
<i>4.5</i>		<i>12</i>	<i>8</i>	<i>feet from steering compass</i>
<i>10.5</i>		<i>15</i>	<i>10</i>	<i>feet from steering compass</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 *Nil* degrees on *any* course in the case of the standard compass and *Nil* degrees on *any* course in the case of the steering compass.

*John Hineston* Builder's Signature. Date *June 7<sup>th</sup> 19*

**GENERAL REMARKS.** *The Installation has been satisfactorily fitted in the vessel, tested at full load & found good.*

*It is submitted that this vessel is eligible for THE RULE*

*JWD* ELEC. LIGHT. *Roll 12.6.19*

*Ed. W. Rutter* 11.6.19  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute



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