

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 25514

Port of Hull Date of First Survey Sep 18/12 Date of Last Survey Sep 26/12 No. of Visits 6
 No. in Reg. Book 25514 on the Iron or Steel S.C.K. "ANDREW KELLY" Port belonging to Grimby
 Built at Selly By whom Cochrane & Sons When built 1912
 Owners Atm Construction Coy. Owners' Address Campbell & Johnson When fitted 1912
 Yard No. Electric Light Installation fitted by

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Campbell & Johnson four pole compound wound dynamo direct coupled to a Rotary engine
 Capacity of Dynamo 30 Amperes at 100 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Starboard side of Engine room Whether single or double wire system is used single
 Position of Main Switch Board Stow bulkhead having switches to groups 3 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Whulhouse 6, Engine room 5, and a switch in a convenient position to each light

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 Yes

Are the cut outs of non-oxidizable metal Yes and constructed to fuse at an excess of 75 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 43 of 16 & 4 of 32 arranged in the following groups:—

A	<u>Forward</u>	lights each of	<u>12 of 16</u>	candle power requiring a total current of	<u>6</u>	Amperes
B	<u>Midships</u>	lights each of	<u>18 of 16 & 5 of 32</u>	candle power requiring a total current of	<u>14</u>	Amperes
C	<u>Aft</u>	lights each of	<u>6 of 16</u>	candle power requiring a total current of	<u>3</u>	Amperes
D	<u>Aft</u>	lights each of	<u>4 of 16 & 1 of 32</u>	candle power requiring a total current of	<u>4.5</u>	Amperes
E		lights each of		candle power requiring a total current of		Amperes
<u>3</u>	<u>Mast head light with</u>	<u>1</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>Included in B</u>	Amperes
<u>2</u>	<u>Side light with</u>	<u>1</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>"</u>	Amperes
<u>3</u>	<u>Cargo lights of</u>	<u>5 of 16</u>		candle power, whether incandescent or arc lights	<u>Incandescent</u>	

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

Where are the switches controlling the masthead and side lights placed Yes

DESCRIPTION OF CABLES.

Main cable carrying	<u>24.5</u> Amperes, comprised of	<u>7</u> wires, each	<u>15</u> L.S.G. diameter,	<u>.028</u> square inches total sectional area
Branch cables carrying	<u>14</u> Amperes, comprised of	<u>7</u> wires, each	<u>14</u> L.S.G. diameter,	<u>.014</u> square inches total sectional area
Branch cables carrying	<u>6</u> Amperes, comprised of	<u>7</u> wires, each	<u>20</u> L.S.G. diameter,	<u>.004</u> square inches total sectional area
Feeds to lamps carrying	<u>1.5</u> Amperes, comprised of	<u>1</u> wires, each	<u>18</u> L.S.G. diameter,	<u>.0018</u> square inches total sectional area
Cargo light cables carrying	<u>2.5</u> Amperes, comprised of	<u>60</u> wires, each	<u>30</u> L.S.G. diameter,	<u>.0033</u> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Insulation rubber protected in cabins by lead wire & braid. In engine room exposed places by lead wire armour & braid.

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

Are all the joints of cables thoroughly soldered, resin only having been used as a flux 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 Yes

How are the cables led through the ship, and how protected In cabins lead wire covered with brass saddle clips. In engine, boiler & fish rooms lead wire covered with armour & braid covered with iron clips.

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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 *Lead wiring, armour, & braid.*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Lead wiring, armour & braid.*

What special protection has been provided for the cables near boiler casings *Lead wiring, armour, & braid.*

What special protection has been provided for the cables in engine room *Lead wiring, armour, & braid.*

How are cables carried through beams *Fibre ferrules.* through bulkheads, &c. *Hands.*

How are cables carried through decks *Cut pipes flanged to ducts.*

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

If so, how are they protected *Lead wiring, armour & braid.*

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 *✓*

Cargo light cables, whether portable or permanently fixed *Portable* How fixed *Special sockets in W.T.C.I. box.*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *Tap bolt of ample area.*

How are the returns from the lamps connected to the hull *Tap screws into duct.*

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

The installation is *also* supplied with a voltmeter and *also* an amperemeter, fixed *on main board.*

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 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 *1000* megohms per 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 & Co. Electrical Engineers

Date *Oct. 2. 1912.*

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	Amperes	feet from standard compass	feet from steering compass
<i>5</i>	<i>1</i>	<i>1</i>	<i>1</i>
<i>14</i>	<i>6</i>	<i>6</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

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.

Bochmann & Sons

Builder's Signature. Date

GENERAL REMARKS. *This installation of electric light has been fitted on board, the materials & workmanship are good & it has been tried satisfactorily under full working conditions.*

This vessel is eligible for THE RECORD Elec. light.

J.W.D.

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

Committee's Minute

TUE. OCT. 15. 1912



Lloyd's Register
Foundation