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## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 29019

Port of Hull Date of First Survey Nov 19/15 Date of Last Survey Dec 11/15 No. of Visits 4  
 No. in on the Steel new tanker Regado Port belonging to  
 Reg. Book Lt 4 Built at Beverley By whom Lock Walton & Gommell When built 1915-12  
 Owners G. F. Height Owners' Address  
 Yard No. Electric Light Installation fitted by Siemens Bros When fitted 1915-12

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Inverted H. P. engine open type coupled direct to Siemens multiple compound wound dynamo

Capacity of Dynamo 40 Amperes at 100 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Engine room Starboard side Whether single or double wire system is used double

Position of Main Switch Board near dynamo having switches to groups 3 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each distribution boxes in after cabin, engine room & wheel house with control switches as required

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 no

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

Total number of lights provided for 67 arranged in the following groups:—

|          |                      |                        |               |  |   |                         |
|----------|----------------------|------------------------|---------------|--|---|-------------------------|
| A        | <u>27</u>            | lights each of         | <u>16</u>     | candle power requiring a total current of        | <u>16.2</u>                               | Amperes                 |
| B        | <u>33</u>            | lights each of         | <u>16.2</u>   | candle power requiring a total current of        | <u>7.8</u>                                | Amperes                 |
| C        | <u>32</u>            | lights each of         | <u>16</u>     | candle power requiring a total current of        | <u>10.2</u>                               | Amperes                 |
| D        |                      | lights each of         |               | candle power requiring a total current of        |   | Amperes                 |
| E        |                      | lights each of         |               | candle power requiring a total current of        |   | Amperes                 |
| <u>3</u> | Mast head light with | <u>1</u>               | lamps each of | <u>32</u>  | candle power requiring a total current of | <u>included</u> Amperes |
| <u>2</u> | Side light with      | <u>1</u>               | lamps each of | <u>32</u>  | candle power requiring a total current of | <u>in</u> Amperes       |
| <u>4</u> | Cargo lights of      | <u>200-6 &amp; 2-3</u> | <u>16</u>     | candle power, whether incandescent or arc lights | <u>above incandescent</u>                 |                         |

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

Where are the switches controlling the masthead and side lights placed Wheel house

## DESCRIPTION OF CABLES.

|                             |             |                       |            |             |           |  |
|-----------------------------|-------------|-----------------------|------------|-------------|-----------|--|
| Main cable carrying         | <u>43.2</u> | Amperes, comprised of | <u>19</u>  | wires, each | <u>17</u> | S.W.G. diameter, <u>.046</u> square inches total sectional area    |
| Branch cables carrying      | <u>19.2</u> | Amperes, comprised of | <u>7</u>   | wires, each | <u>18</u> | S.W.G. diameter, <u>.0125</u> square inches total sectional area   |
| Branch cables carrying      | <u>16.2</u> | Amperes, comprised of | <u>7</u>   | wires, each | <u>18</u> | S.W.G. diameter, <u>.0125</u> square inches total sectional area   |
| Leads to lamps carrying     | <u>3.6</u>  | Amperes, comprised of | <u>1</u>   | wires, each | <u>18</u> | S.W.G. diameter, <u>.0070</u> square inches total sectional area   |
| Cargo light cables carrying | <u>3.6</u>  | Amperes, comprised of | <u>136</u> | wires, each | <u>40</u> | S.W.G. diameter, <u>.002463</u> square inches total sectional area |

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

H. I. R. lead covered & armoured

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 ✓ 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 Through knees clipped to underside of deck & to bulkheads with strong wrought-iron clips galvanized. Armoured cables



DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *no*

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *had covered & armoured*

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

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 *had bushes when not armoured* through bulkheads, &c. *watertight glands*

How are cables carried through decks *Iron deck pipes*

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 *had covered & armoured*

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

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 *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 *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.

*C. H. Kennedy* Electrical Engineers Date *24<sup>th</sup> March, 1916.*

COMPASSES.

Distance between dynamo or electric motors and standard compass *About 40 Feet.*

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>16.2</i>      | <i>7</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 *COOK, WILTON & GERRARD, LTD.* *and* course in the case of the steering compass.

*W. H. Patterson* Builder's Signature. Date *27<sup>th</sup> March 1916*

GENERAL REMARKS.

*This vessel has been fitted with an electric light installation as above & the workmanship is good. On completion it was tested under full working conditions & found satisfactory.*

*It is submitted that this vessel is eligible for THE RECORD Elec. light.* *J. W. D.* *30/3/16* *Frank L. Stanger* Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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