

WED. OCT. 29. 1913

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 26804

Port of Hull Date of First Survey 4-9-13 Date of Last Survey 14-10-13 No. of Visits 7
 No. in on the Iron or Steel 16 New Sweden Port belonging to Göteborg
 Reg. Book Lup 14 Built at Hull By whom Carlis & Co Ltd When built 1913-10
 Owners (A. Brostrom & Son Lgm) Owners' Address _____
 Yard No. 600 Electric Light Installation fitted by Clarke Chapman & Co When fitted 1913-10

DESCRIPTION OF DYNAMO, ENGINE, ETC.

High Pressure Vertical direct acting engine, open type, coupled direct to 6 pole compound wound dynamo
 Capacity of Dynamo 90 Amperes at 100 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Engine room bottom platform Whether single or double wire system is used double
 Position of Main Switch Board " near dynamo having switches to groups 4 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each chart room 7. engine room 6

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 122 arranged in the following groups:—

A Alom { <u>26</u> lights each of <u>32</u>	candle power requiring a total current of <u>34.22</u>	Amperes
B { <u>2</u> lights each of <u>32</u>	candle power requiring a total current of _____	Amperes
C Engine room { <u>19</u> lights each of <u>32</u>	candle power requiring a total current of <u>20.3</u>	Amperes
D Opts { <u>15</u> lights each of <u>32</u>	candle power requiring a total current of <u>14.5</u>	Amperes
E Engine room { <u>31</u> lights each of <u>16</u>	candle power requiring a total current of <u>17.92</u>	Amperes
two Mast head light with <u>1</u> lamps each of <u>32</u>	candle power requiring a total current of <u>2.32</u>	Amperes
two Side light with <u>1</u> lamps each of <u>32</u>	candle power requiring a total current of <u>2.32</u>	Amperes
four Cargo lights of <u>four</u> <u>32</u>	candle power, whether incandescent or arc lights <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 Chart room

DESCRIPTION OF CABLES.

Main cable carrying 87 Amperes, comprised of 19 wires, each 15 L.S.G. diameter, .075 square inches total sectional area
 Branch cables carrying 34.22 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .02227 square inches total sectional area
 Branch cables carrying 14.5 Amperes, comprised of 7 wires, each 20 L.S.G. diameter, .007 square inches total sectional area
 Leads to lamps carrying 1.2 Amperes, comprised of 1 wires, each 12 L.S.G. diameter, .00181 square inches total sectional area
 Cargo light cables carrying 4.64 Amperes, comprised of 168 wires, each 38 L.S.G. diameter, .00502 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Taped lead covered & armoured

Joints in cables, how made, insulated, and protected no joints except mechanical ones in junction boxes

Are all the joints of cables thoroughly soldered, resin only having been used as a flux ✓ 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 beams & on fore & aft-pieces above main deck & clipped to same with wrought-iron clips (galva)

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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 covered & armoured*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Lead 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 *lead bushes* through bulkheads, &c. *water tight glands*

How are cables carried through decks *deck pipes 18" high fitted with double nuts & washers*

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 *Lead covered & armoured & clipped to upper side of fore & aft guide*

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 *W. T. connector boxes*

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 *✓*

The installation is *supplied with a voltmeter and* an amperemeter, fixed *on main switch box*

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 *600* 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.

For Clarke, Chapman & Co., Ltd.

W. Morrison Director,

Electrical Engineers

Date *Oct. 17th 1913*

COMPASSES.

Distance between dynamo or electric motors and standard compass *about 150 ft*

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>9</i>	<i>10</i>	<i>10</i>	
<i>1.8</i>	<i>6</i>	<i>6</i>	
<i>✓</i>	<i>✓</i>	<i>✓</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 *full* course in the case of the standard compass and *FOR LARLES* degrees on *all* course in the case of the steering compass.

SHIPBUILDING & ENGINEERING CO. LIMITED.

Builder's Signature.

Date *25th October 1913*

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.

Thankd. Sturgeon.

J.W.D. 29/10/13. 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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