

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 55017

Port of *Newcastle & Tyne* Date of First Survey *June 12* Date of Last Survey *June 29* No. of Visits *6*
 No. in on the Iron or Steel *SS Indianie* Port belonging to *Göteborg*
 Reg. Book *63* Built at *Helsingfors* By whom *Hawthorn Leslie & Co Ltd* When built *1908*
 Owners *Rederiaktie Samfundet* Owners' Address *Göteborg*
 Yard No. *A23* Electric Light Installation fitted by *J. Stoholmes & Co H/Ch* When fitted *1908*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

*One 6 1/2" x 6" Open Type Foster engine, 90 lbs pressure coupled to
 One 15/17 Dynamo, compound wound 250 Reos*
 Capacity of Dynamo *72* Amperes at *100* Volts, whether continuous or alternating current *continuous*
 Where is Dynamo fixed *Starb^d side engine room* Whether single or double wire system is used *D. W. S.*
 Position of Main Switch Board *Starb Bulkhead, Eng. Room* having switches to groups *A. B. C.* of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each *1-2 way - Starb in Messroom for Eng^{rs}, Officers & Midships
 1-9 way - do - in Pantry for Saloon & 1-way - do - in Chart Room for navigation; 1-6 way - do - in Messroom for Cargos
 1-6 way - do - in engine room for engines, Stokerhold, Tunnel; 1-4 way - do - in Passage forward for seamen & firemen*
 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 *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 *yes*
yes 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 *108-16 cp. 5-32 cp.* arranged in the following groups:—

A	<i>Engine Room</i>	<i>30</i> lights each of	<i>16 cp</i>	candle power requiring a total current of	<i>16.8.</i>	Amperes
B	<i>Cargos</i>	<i>32</i> lights each of	<i>16 cp.</i>	candle power requiring a total current of	<i>17.9</i>	Amperes
C	<i>Midships</i>	<i>53</i> lights each of	<i>16 cp (inc 5-32)</i>	candle power requiring a total current of	<i>29.6.</i>	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
	<i>2 Mast-head lights</i>	<i>with 1 lamp each of</i>	<i>32</i>	candle power requiring a total current of	<i>1.2</i>	Amperes
	<i>2 Side lights</i>	<i>with 1 lamp each of</i>	<i>32</i>	candle power requiring a total current of	<i>1.2.</i>	Amperes
	<i>A Cargo lights</i>	<i>of 8 x 16</i>		candle power, whether incandescent or arc lights	<i>incandescent</i>	

If arc lights, what protection is provided against fire, sparks, &c. *Chartouse.*
 Where are the switches controlling the masthead and side lights placed *Chartouse.*

DESCRIPTION OF CABLES.

Main cable carrying	<i>62</i> Amperes, comprised of	<i>19</i> wires, each	<i>15</i> L.S.G. diameter,	<i>.0765</i> square inches total sectional area
Branch cables carrying	<i>17</i> Amperes, comprised of	<i>7</i> wires, each	<i>17</i> L.S.G. diameter,	<i>.0170</i> square inches total sectional area
Branch cables carrying	<i>29</i> Amperes, comprised of	<i>19</i> wires, each	<i>18</i> L.S.G. diameter,	<i>.0240</i> square inches total sectional area
Leads to lamps carrying	<i>.56</i> Amperes, comprised of	<i>1</i> wires, each	<i>18</i> L.S.G. diameter,	<i>.0018</i> square inches total sectional area
Cargo light cables carrying	<i>A.A.</i> Amperes, comprised of	<i>7</i> wires, each	<i>2 1/2</i> L.S.G. diameter,	<i>.0050</i> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

*Pure Para rubber, Vulcan^d & Insulated ^{Lead covered} & Braided
 Overall*
 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* 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 *Unarmoured ch. C. cables clipped with steel clips*



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 or Armoured wires

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

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

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

How are cables carried through beams Insulating Bushes through bulkheads, &c. Stuffing boxes

How are cables carried through decks Deck Gubes

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 cable

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 W. T. Socket

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 also an amperemeter, fixed on main subd.

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.

J. H. Heck Electrical Engineers Date July 15 1908

COMPASSES.

Distance between dynamo or electric motors and standard compass 90 ft

Distance between dynamo or electric motors and steering compass 85 ft

The nearest cables to the compasses are as follows:—

A cable carrying <u>8.9</u> Amperes	<u>14</u> feet from standard compass	<u>10</u> feet from steering compass
A cable carrying <u>.56</u> Amperes	<u>10</u> feet from standard compass	<u>6</u> feet from steering compass
A cable carrying _____ Amperes	_____ feet from standard compass	_____ 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 nil degrees on _____ course in the case of the standard compass and nil degrees on _____ course in the case of the steering compass.

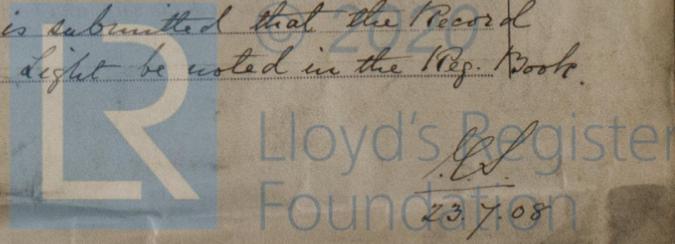
For R. & W. HAWTHORN, LESLIE & CO. LIMITED.

E. Mableford Builder's Signature. Date 18 July 1908

GENERAL REMARKS. The installation has been examined & found in good order.

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

Committee's Minute _____ It is submitted that the Record Rec. Light be noted in the Reg. Book.



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REFORM FORM No. 13. 5m. 24.