

# REPORT ON ELECTRIC LIGHTING INSTALLATION.

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No. 61982

Port of *Newcastle-on-Tyne* Date of First Survey *12th Mar* Date of Last Survey *25th Mar* No. of Visits *6*  
 No. in Reg. Book *49* on the *Iron* *Steel* *Dreadful* Port belonging to  
 Built at *South Shields* By whom *Kepple & Co Ltd* When built *1911*  
 Owners *London & Western Lumber Co.* Owners' Address *THE NORTHERN ELECTRICAL ENGINEERING AND PLATING CO. LTD* When fitted *1912*  
 Yard No. *021* Electric Light Installation fitted by

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

*None fitted.* *South Shields*

Capacity of Dynamo \_\_\_\_\_ Amperes at \_\_\_\_\_ Volts, whether continuous or alternating current  
 Where is Dynamo fired \_\_\_\_\_ Whether single or double wire system is used *double*  
 Position of Main Switch Board \_\_\_\_\_ having switches to groups *Five main* of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each *an average of two* circuits of lights, &c., as below  
*on each switch. Each switch point fitted as near as possible to respective light*  
 If cut outs are fitted on main switch board to the cables of main circuit \_\_\_\_\_ and on each auxiliary switch board to the cables of auxiliary circuits \_\_\_\_\_ and at each position where a cable is branched or reduced in size \_\_\_\_\_ and to each lamp circuit  
 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-oxidisable metal \_\_\_\_\_ and constructed to fuse at an excess of \_\_\_\_\_ per cent over the normal current  
 Are all cut outs fitted in easily accessible positions \_\_\_\_\_ Are the fuses of standard dimensions \_\_\_\_\_ 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 \_\_\_\_\_  
 Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases \_\_\_\_\_

Total number of lights provided for *43* arranged in the following groups:—

A	<i>11</i> lights each of <i>16</i> candle power requiring a total current of _____ Amperes
B	<i>26</i> lights each of <i>16</i> candle power requiring a total current of _____ Amperes
C	<i>14</i> lights each of <i>16</i> candle power requiring a total current of _____ Amperes
D	<i>4</i> lights each of <i>16</i> candle power requiring a total current of _____ Amperes
E	<i>0</i> lights each of <i>16</i> candle power requiring a total current of _____ Amperes
Engine Room	<i>12</i> lights each of _____ candle power requiring a total current of _____ Amperes
Mast head light	<i>1</i> lamp each of <i>32</i> candle power requiring a total current of _____ Amperes
Side light	<i>1</i> lamp each of <i>32</i> candle power requiring a total current of _____ Amperes
Cargo lights	<i>4</i> each of <i>0-16</i> candle power, whether incandescent or arc lights <i>incandescent</i>

If arc lights, what protection is provided against fire, sparks, &c. *Cable circuit for searchlight*  
*Projector taking 20 amperes*  
 Where are the switches controlling the masthead and side lights placed *Chart House*

## DESCRIPTION OF CABLES.

Main cable carrying _____ Amperes, comprised of _____ wires, each _____ L.S.G. diameter, _____ square inches total sectional area
Branch _____ Amperes, comprised of _____ wires, each _____ L.S.G. diameter, _____ square inches total sectional area
Branch cables carrying _____ Amperes, comprised of _____ wires, each _____ L.S.G. diameter, _____ square inches total sectional area
Leads to lamps carrying _____ Amperes, comprised of _____ wires, each _____ L.S.G. diameter, _____ square inches total sectional area
Cargo light cables carrying _____ Amperes, comprised of _____ wires, each _____ L.S.G. diameter, _____ square inches total sectional area
Searchlight cable _____ Amperes, comprised of _____ wires, each _____ L.S.G. diameter, _____ square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

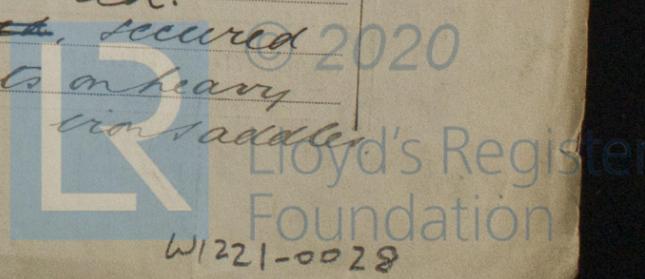
*Pure rubber, vulcanised rubber, & tinned & braided.*  
*Lead covered, & lead covered & gal. iron wire ~~armoured~~.*  
*Also screwed galvanised conduit armoured.*

Joints in cables, how made, insulated, and protected *No joints*

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 \_\_\_\_\_ *armoured*

How are the cables led through the ship, and how protected *Lead covered & secured with gal iron saddles; and Gal. screwed conduits on heavy iron saddles*



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 Galvanised screwed conduit, and lead covered & armoured

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 ferrules through bulkheads, &c. in pipes with lead

How are cables carried through decks Lead pipes with W.T. flanges Watertight flanges

Are any cables run through coal bunkers no or cargo spaces no or spaces which may be used for carrying cargo, stores, or baggage yes

If so, how are they protected Galvanised screwed conduit

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 permanently How fixed Lead cord in lead Gal Conduit.

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 \_\_\_\_\_

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 98 per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 1600 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 THE NORTHERN ELECTRICAL ENGINEERING AND PLATING CO., LTD.

Electrical Engineers Date April 25th 1912.

COMPASSES.

Thomas Harrison } 58 feet  
 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	<u>5 cps for compass</u>	feet from standard compass	feet from steering compass
A cable carrying	Amperes		feet from standard compass	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 \_\_\_\_\_

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.

W. J. Hepple  
 MANAGING DIRECTOR.

Builder's Signature. Date April 25th 1912.

GENERAL REMARKS. Only the wiring has been carried out on this contract. The Dynamo, the switch board and the lamps & their fittings are to be fitted on board on vessels arrival in America.

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

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



Handwritten initials 'GJ'