

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 20742

Port of *Newcastle* Date of First Survey *Hull Aug 29<sup>th</sup>* Date of Last Survey *Hull Dec 3<sup>rd</sup>* No. of Visits *9*  
 Not in *on the Iron or Steel* *S. S. Galilee* Port belonging to *Hull*  
 Reg. Book *10 Supp.* Built at *Newcastle* By whom *The Northumbrian & B. Co.* When built *1908*  
 Owners *J. Wilson Sons & Co. Ltd.* Owners' Address *Hull*  
 Yard No. *15-1* Electric Light Installation fitted by *J. Wilson Sons & Co. Ltd.* When fitted *1908*

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

*Single cylinder direct acting engine, coupled to a 12 H.P. dynamo made by Messrs Clarke Chapman & Co. Ltd.*  
 Capacity of Dynamo *120* Amperes at *100* Volts, whether continuous or alternating current *Continuous*  
 Where is Dynamo fixed *Port side of engine room.* Whether single or double wire system is used *Double wire*  
 Position of Main Switch Board *On bulkhead of engine store having switches to groups close to dynamo.* *four circuits* of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each *Each light is fitted with a separate switch.*

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 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 *154* arranged in the following groups:—

A	<i>51</i>	lights each of	<i>16</i>	candle power requiring a total current of	<i>30.6</i>	Amperes
B	<i>62</i>	lights each of	<i>16</i>	candle power requiring a total current of	<i>37.2</i>	Amperes
C	<i>22</i>	lights each of	<i>16</i>	candle power requiring a total current of	<i>13.2</i>	Amperes
D	<i>19</i>	lights each of	<i>16</i>	candle power requiring a total current of	<i>14.4</i>	Amperes
E		lights each of		candle power requiring a total current of		Amperes
<i>1</i>	<i>Mast head light with</i>	<i>2</i>	<i>lamps each of</i>	<i>16</i>	candle power requiring a total current of	Amperes
<i>2</i>	<i>Side light with</i>	<i>4</i>	<i>lamps each of</i>	<i>16</i>	candle power requiring a total current of	Amperes
<i>6</i>	<i>Cargo lights of</i>	<i>6</i>	<i>16</i>	candle power, whether incandescent or arc lights	<i>Incandescent</i>	

If arc lights, what protection is provided against fire, sparks, &c. *None fitted.*

Where are the switches controlling the masthead and side lights placed *In chart room*

## DESCRIPTION OF CABLES.

Main cable carrying *92* Amperes, comprised of *21* wires, each *14* L.S.G. diameter, *.1037* square inches total sectional area  
 Branch cables carrying *30.6* Amperes, comprised of *7* wires, each *14* L.S.G. diameter, *.0345* square inches total sectional area  
 Branch cables carrying *37.2* Amperes, comprised of *7* wires, each *14* L.S.G. diameter, *.0345* square inches total sectional area  
 Leads to lamps carrying *.6* Amperes, comprised of *1* wires, each *18* L.S.G. diameter, *.0018* square inches total sectional area  
 Cargo light cables carrying *3.6* Amperes, comprised of *7* wires, each *22* L.S.G. diameter, *.0042* square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

*All cables 600 Megohm's lead covered & armoured with galvanized steel wires.*

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

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 *Led through beams & protected with a galvanized armoring.*



S100-619M



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 & protected with a galvanized armoring*

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 *Lead covered & armoured*

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

How are cables carried through beams *clipped to deck* through bulkheads, &c. *with T. T. glands.*

How are cables carried through decks *through deck tubes*

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 covered & steel galvanized armoring*

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 *None fitted*

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 *C. I. Connection 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 *now* supplied with a voltmeter and *"* an amperemeter, fixed *on Switchboard*

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 *No*

How are the lamps specially protected in places liable to the accumulation of vapour or gas *None fitted*

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.

*James Wilson Jones & Co Ltd*

Electrical Engineers

Date *Nov 4. 1908.*

COMPASSES.

Distance between dynamo or electric motors and standard compass

*200 ft.*

Distance between dynamo or electric motors and steering compass

*190 ft.*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>6</i>	<i>fitted in</i>	<i>8</i>	<i>8</i>
<i>1</i>	<i>6</i>	<i>8</i>	<i>8</i>
<i>5</i>	<i>12</i>	<i>9</i>	<i>9</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

*No*

degrees on

*all*

course in the case of the

standard compass and

*No*

degrees on

*all*

course in the case of the steering compass.

*Thos R. Watson, Master*

Builder's Signature.

Date

*Dec 11. 1908*

GENERAL REMARKS.

*This vessel having been fitted with an Electric Light Installation, is eligible in my opinion to have same noted in Register Book.*  
*James Barclay.*  
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.*

Lloyd's Register  
Foundation

*12.12.08*

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.