

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 56828

Port of *Liverpool* / Type. Date of First Survey *18<sup>th</sup> May* Date of Last Survey *5<sup>th</sup> June* No. of Visits *6*  
 No. in Reg. Book *5-5: Wheatfield* Port belonging to *Criff*  
 Built at *South Shields* By whom *J. Y. Eltringham & Co* When built *1909*  
 Owners *Spillers & Baker Ltd.* Owners' Address *Cardiff*  
 Yard No. *271* Electric Light Installation fitted by *Sunderland Forge & Eng. Co. Ltd.* When fitted *1909*

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

*Multipolar compound wound dynamo direct coupled to open type inverted engine both by The Sunderland Forge & Eng. Co. Ltd.*

Capacity of Dynamo *30* Amperes at *100* Volts, whether continuous or alternating current *continuous*

Where is Dynamo fixed *in Engine Room* Whether single or double wire system is used *double*

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

Positions of auxiliary switch boards and numbers of switches on each *One in Chart room having 4 switches for side lights 2 - Masthead 1 and Binnacle 1.*

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 *100* per cent over the normal current

Are all cut outs fitted in easily accessible positions *yes* Are the fuses of standard dimensions *no* 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 *51* arranged in the following groups:—

A	<i>12</i>	lights each of	<i>16</i>	candle power requiring a total current of	<i>6.72</i>	Amperes
B	<i>18</i>	lights each of	<i>16</i>	candle power requiring a total current of	<i>10.08</i>	Amperes
C	<i>21</i>	lights each of	<i>16</i>	candle power requiring a total current of	<i>11.76</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</i>	Mast head light with	<i>1</i> lamps each of <i>32 cp DF</i>	candle power requiring a total current of	<i>2.24</i>	Amperes
	<i>2</i>	Side light with	<i>1</i> lamps each of <i>32 cp DF</i>	candle power requiring a total current of	<i>2.24</i>	Amperes
	<i>2</i>	Cargo lights of	<i>4 x 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 *2 Side lights 1 Masthead in Chart Room do in Forecastle*

## DESCRIPTION OF CABLES.

Main cable carrying	<i>28.56</i> Amperes, comprised of	<i>7</i> wires, each	<i>14</i>	L.S.G. diameter, .0352 square inches total sectional area
Branch cables carrying	<i>6.72</i> Amperes, comprised of	<i>7</i> wires, each	<i>20</i>	L.S.G. diameter, .00714 square inches total sectional area
Branch cables carrying	<i>10.08</i> Amperes, comprised of	<i>7</i> wires, each	<i>18</i>	L.S.G. diameter, .00124 square inches total sectional area
Leads to lamps carrying	<i>1.12</i> Amperes, comprised of	<i>1</i> wires, each	<i>18</i>	L.S.G. diameter, .00181 square inches total sectional area
Cargo light cables carrying	<i>2.24</i> Amperes, comprised of	<i>1</i> wires, each	<i>16</i>	L.S.G. diameter, .00322 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

*All Cables, Pure rubber vulcanised rubber Taped braided and compounded run in screwed steel tubing throughout ship*

Joints in cables, how made, insulated, and protected

*There are none*

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 Cargo holds in screwed steel tubing*



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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 Steel Tubing

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 Tubing carried right through bulkheads, &c. watertight glands

How are cables carried through decks watertight 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 Steel Tubing

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coats, 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

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 yes supplied with a voltmeter and no 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

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 99 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.

P. PRO THE SUNDERLAND FORGE & ENGINEERING CO. LTD.

Electrical Engineers

Date 15/6/09

COMPASSES:

Distance between dynamo or electric motors and standard compass about 100 feet

Distance between dynamo or electric motors and steering compass do.

The nearest cables to the compasses are as follows:—

A cable carrying <u>10.08</u>	Amperes <u>8</u>	feet from standard compass <u>8</u>	feet from steering compass
A cable carrying <u>.56</u>	Amperes <u>led into</u>	feet from standard compass <u>8</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 all course in the case of the standard compass and — degrees on — course in the case of the steering compass.

Jo. J. Whimham & Co Builder's Signature. Date June 29/09

GENERAL REMARKS.

The elec Installation has been fitted under Survey  
The materials and workmanship, as far as can be seen, are  
sound and good  
It is submitted this vessel is  
eligible for the notation "Elec. Light"  
W. Law  
9.7.09

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

Committee's Minute



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