

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 61722

Port of NEWCASTLE ON TYNE Date of First Survey 27th Dec 1911 Date of Last Survey 19th Jan 1912 No. of Visits 6
 No. in on the ~~iron~~ Steel S.S. "Vascope" Port belonging to St John's Newfoundland
 Reg. Book Built at Walker By whom Swan, Hunter & Wigham Richardson built 1912
 Owners Job. Brothers Owners' Address Liverpool
 Yard No. 840 Electric Light Installation fitted by Johnson & Phillips When fitted 1912

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One vertical, open fronted, double acting, single cylinder engine direct coupled to a continuous current compound wound dynamo.

Capacity of Dynamo 109 Amperes at 110 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed centre platform in Engine room Whether single or double wire system is used Double

Position of Main Switch Board near dynamo having switches to groups A B C D E F of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Each light & group of lights fitted with switches as required.

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, porcelain

Total number of lights provided for 121 @ 16 cp. arranged in the following groups:—

A	30	lights each of	16	candle power requiring a total current of	18.0	Amperes
B	43	lights each of	16	candle power requiring a total current of	25.8	Amperes
C	28	lights each of	16	candle power requiring a total current of	16.8	Amperes
D	20	lights each of	16	candle power requiring a total current of	12.0	Amperes
E	Projector	lights each of	16000	candle power requiring a total current of	55.0	Amperes
F	Micro	lights each of	16000	candle power requiring a total current of	30.0	Amperes
2	Mast head light with	1 lamp each of	32	candle power requiring a total current of	1.2	Amperes
2	Side light with	1 lamp each of	32	candle power requiring a total current of	1.2	Amperes
3	Cargo lights of	6 -	16	candle power, whether incandescent or arc lights	incandescent	

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

Where are the switches controlling the masthead and side lights placed 6 Chartroom

DESCRIPTION OF CABLES.

Main cable carrying 109 Amperes, comprised of 34 wires, each 16 L.S.G. diameter, .11680 square inches total sectional area
 Branch cables carrying 43 Amperes, comprised of 19 wires, each 14 L.S.G. diameter, .04593 square inches total sectional area
 Branch cables carrying 6 Amperes, comprised of 4 wires, each 20 L.S.G. diameter, .00700 square inches total sectional area
 Leads to lamps carrying .6 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, .00181 square inches total sectional area
 Cargo light cables carrying 3.6 Amperes, comprised of 108 wires, each 38 L.S.G. diameter, .0032 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

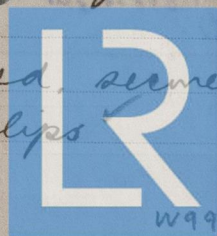
Valcanized india rubber taped & braided & lead covered; where exposed steel armoured over the lead covering, & braided overall.

Joints in cables, how made, insulated, and protected None, except mechanical ones.

Are all the joints of cables thoroughly soldered, resin only having been used as a flux yes 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 yes no

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 Lead covered & armoured, securely clipped to underside of deck by galvanized iron clips



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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 *Lead covered*
armoured & braided ✓
 What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Lead armoured* ✓
 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 *in lead fibre bushes* ✓ through bulkheads, &c. *in bulkhead glands* ✓
 How are cables carried through decks *in galvanized iron deck tubes* ✓
 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 & braided* ✓
 Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *Yes* ✓
 If so, how are the lamp fittings and cable terminals specially protected *Cast iron fittings with covers* ✓
 Where are the main switches and cut outs for these lights fitted *in Saloon passage* ✓
 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 *to C.I. Connection boxes* ✓
 In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *double wire system* ✓
 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 *also* ✓ 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 *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.

JOHNSON & PHILLIPS LTD.

Electrical Engineers

Date *6. Februy 1912.*

COMPASSES.

Distance between dynamo or electric motors and standard compass *46 feet*
 Distance between dynamo or electric motors and steering compass *42 feet*
 The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>55</i>	<i>6</i>	<i>6</i>	<i>6</i>
<i>.6</i>	<i>6</i>	<i>2</i>	<i>2</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 _____ course in the case of the standard compass and *Nil* ✓ degrees on _____ course in the case of the steering compass.

SWAN, HUNTER & WIGHAM RICHARDSON LTD.

Builder's Signature.

Date *9 February 1912*

GENERAL REMARKS.

This Electric Light Installation has been satisfactorily fitted on board and the vessel in my opinion is eligible to have the record of Electric light made in the Register book.
It is submitted that this vessel is eligible for THE RECORD Elec. light.
W. C. Davis
 Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute



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