

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 61221

Port of Newcastle-on-Tyne. Date of First Survey 21<sup>st</sup> Sept Date of Last Survey 16<sup>th</sup> Oct No. of Visits 6  
 No. in 55 on the Iron or Steel Cho-sen-maru Port belonging to Osaka  
 Reg. Book Low-Walker Built at Low-Walker By whom Sir Armstrong Whitworth & Co When built 1911  
 Owners Osaka Shosen Kaisha Owners' Address Osaka  
 Yard No. 839 Electric Light Installation fitted by Clarke Chapman & Co When fitted 1911

**DESCRIPTION OF DYNAMO, ENGINE, ETC.**

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

Capacity of Dynamo 55 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 near Dynamo. having switches to groups A B C of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Back light & group of lights provided 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 Slate & porcelain, Yes.

Total number of lights provided for 85 arranged in the following groups :-

A	<u>39</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>23.4</u>	Amperes
B	<u>23</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>13.8</u>	Amperes
C	<u>23</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>13.8</u>	Amperes
D	<u>—</u>	lights each of	<u>—</u>	candle power requiring a total current of	<u>—</u>	Amperes
E	<u>—</u>	lights each of	<u>—</u>	candle power requiring a total current of	<u>—</u>	Amperes
<u>2</u>	<u>Mast head light with</u>	<u>1</u>	<u>lamp</u>	each of	<u>32</u>	candle power requiring a total current of <u>1.2</u> Amperes
<u>2</u>	<u>Side light with</u>	<u>1</u>	<u>lamp</u>	each of	<u>32</u>	candle power requiring a total current of <u>1.2</u> Amperes
<u>4</u>	<u>Cargo lights of each</u>	<u>5</u>	<u>-16</u>	candle power, whether incandescent or arc lights	<u>incandescent.</u>	

If arc lights, what protection is provided against fire, sparks, &c. —

Where are the switches controlling the masthead and side lights placed in Wheel House.

**DESCRIPTION OF CABLES.**

Main cable carrying 55 Amperes, comprised of 19 wires, each 16 L.S.G. diameter, .06000 square inches total sectional area

Branch cables carrying 22 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .02214 square inches total sectional area

Branch cables carrying 7 Amperes, comprised of 7 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 Amperes, comprised of 168 wires, each 38 L.S.G. diameter, .00502 square inches total sectional area

**DESCRIPTION OF INSULATION, PROTECTION, ETC.**

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

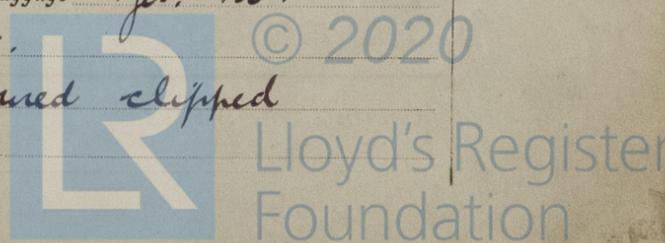
Joints in cables, how made, insulated, and protected no joints except mechanical ones.

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 clipped to underside of Deck.

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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 & steel armoured

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 " — "

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

How are cables carried through beams in lead bushes through bulkheads, &c. in glands

How are cables carried through decks in galvanized iron 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 armoured.

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 portable. How fixed to W.T.C. 1. Connection Box.

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 new supplied with a voltmeter and an amperometer, fixed 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.

For Clarke, Chapman & Co. Ltd.

W. Walker Chairman

Electrical Engineers

Date November 9<sup>th</sup> 1911

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 96' ft

Distance between dynamo or electric motors and steering compass 90' "

The nearest cables to the compasses are as follows:—

A cable carrying	<u>.6</u>	Amperes	<u>12</u>	feet from standard compass	<u>6</u>	feet from steering compass
A cable carrying	<u>.6</u>	Amperes	<u>6</u>	feet from standard compass	<u>12</u>	feet from steering compass
A cable carrying	<u>—</u>	Amperes	<u>—</u>	feet from standard compass	<u>—</u>	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 courses in the case of the standard compass and nil degrees on -all courses in the case of the steering compass.

FOR SIR W. G. ARMSTRONG, WHITWORTH & CO. LTD.

R. Stanton White

Builder's Signature.

Date 11<sup>th</sup> Nov 1911

**GENERAL REMARKS.**

This Electric Light installation has been satisfactorily fitted on board, and the vessel is eligible in my opinion to have the record Electric Light in the Register Book

It is submitted that this vessel is eligible for

**THE RECORD Elec light.**

J.W. DREXLER  
17/11/11

R.W. Croucher.

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

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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