

REPORT ON ELECTRIC LIGHTING INSTALLATION.

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No. 1275Port of **NAGASAKI**Date of First Survey *16th Dec. 1919* Date of Last Survey *10th Jan. 1920* No. of Visits *4*No. in Reg. Book *on the Iron or Steel* *S. S. Eastern Crown* Port belonging toBuilt at *Nagasaki*By whom *Mitsubishi Zosen Kaisha* When built *1920*Owners *A. S. Shipping Board (E. F. C.)* Owners' AddressYard No. *315* Electric Light Installation fitted by *Mitsubishi Zosen Kaisha* When fitted *1920*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

*Two sets of a compound continuous current dynamo on the same bed plate with a vertical engine.*Capacity of Dynamo *150* Amperes at *100* Volts, whether continuous or alternating current *Continuous*Where is Dynamo fixed *On starboard side of Engine Room platform.*Position of Main Switch Board *On ship's side (starboard) having switches to groups* *5 6 83* of lights, &c., as belowPositions of auxiliary switch boards and numbers of switches on each *Two in fore-castle six in midship deck house, and three in engine room.*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 *No*

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-oxidizable metal *Yes* and constructed to fuse at an excess of *50* per cent over the normal currentAre all cut outs fitted in easily accessible positions *Yes* Are the fuses of standard dimensions *Yes* If wire fuses are usedare 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 *Five circuits* arranged in the following groups:—

A Fore Circuit			
lights each of	<i>37</i>	<i>1</i>	candle power requiring a total current of <i>34.15</i> Amperes
B Midship			
lights each of	<i>4.79</i>	<i>—</i>	candle power requiring a total current of <i>16.87</i> Amperes
C aft			
lights each of	<i>2.7</i>	<i>18</i>	candle power requiring a total current of <i>31.77</i> Amperes
D Machinery Space			
lights each of	<i>39</i>	<i>4</i>	candle power requiring a total current of <i>15.77</i> Amperes
E Navigation Lamp			
lights each of	<i>—</i>	<i>5</i>	candle power requiring a total current of <i>5.6</i> Amperes
<i>Two</i> Mast head light with <i>lens</i> lamps each of	<i>32</i>	<i>—</i>	candle power requiring a total current of <i>1.12</i> Amperes
<i>Two</i> Side lights with <i>lens</i> lamps each of	<i>32</i>	<i>—</i>	candle power requiring a total current of <i>1.12</i> Amperes
<i>One</i> Stern light with <i>lens</i> lamp each of	<i>32</i>	<i>—</i>	candle power requiring a total current of <i>1.12</i> Amperes
<i>One</i> More or less signal lamp with <i>3</i> lamps each of	<i>16</i>	<i>—</i>	candle power, whether incandescent or are lights <i>Incandescent</i>
<i>Six</i> Cargo lights of <i>6 x 32</i>	<i>1000</i>	<i>—</i>	<i>Incandescent</i>
<i>Two</i> " " " " " "	<i>—</i>	<i>—</i>	<i>Incandescent</i>

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

Where are the switches controlling the masthead and side lights placed *In chart Room on Flying Bridge.*

DESCRIPTION OF CABLES.

Main cable carrying	<i>150</i>	Amperes, comprised of	<i>37</i>	wires, each	<i>15</i>	L.S.G. diameter, <i>0.1544</i> square inches total sectional area
Branch cables carrying	<i>34.15</i>	Amperes, comprised of	<i>19</i>	wires, each	<i>18</i>	L.S.G. diameter, <i>0.0357</i> square inches total sectional area
Branch cables carrying	<i>5.6</i>	Amperes, comprised of	<i>7</i>	wires, each	<i>20</i>	L.S.G. diameter, <i>0.0070</i> square inches total sectional area
Leads to lamps carrying	<i>21</i>	Amperes, comprised of	<i>1</i>	wires, each	<i>18</i>	L.S.G. diameter, <i>0.0018</i> square inches total sectional area
Cargo light cables carrying	<i>6.72</i>	Amperes, comprised of	<i>283</i>	wires, each	<i>38</i>	L.S.G. diameter, <i>0.0080</i> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

*These cables are composed of tinned copper insulated with pure india rubber, vulcanizing india rubber coated tape, and the whole vulcanized together, then lead covered, or lead covered and armoured with galvanized iron wire.**Joints in cables, how made, insulated, and protected Joints in cable are made in brass pieces fitted on porcelain bases in aluminium board and distributing board in tank case or extension box of porcelain base, and some joints in cast iron box are soldered and insulated with pure rubber or rubber coated tape.**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**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 On the double wire system, and cables are protected by lead covers, or galvanized iron wire armoured or galvanized iron pipes.*

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 Galvanized iron pipes or galvanized iron wire armouring.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Galvanized iron wire armouring.

What special protection has been provided for the cables near boiler casings Galvanized iron wire armouring.

What special protection has been provided for the cables in engine room Galvanized iron wire armouring or galvanized iron pipes.

How are cables carried through beams Through lead bushes through bulkheads, &c. Water tight packing glands.

How are cables carried through decks 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 ☒

If so, how are they protected Galvanized iron wire armouring or galvanized iron pipes.

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 Fibre fork and connector

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 ☒

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 installation is _____ supplied with a voltmeter and _____ an amperemeter, fixed on Main Switch board

The copper used is guaranteed to have a conductivity of 99.6 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.

NAGASAKI WORKS, MITSUBISHI ZOSSEN KAISHA, LTD.

Electrical Engineers

Date 7th Feb 1920

COMPASSES.

Distance between dynamo or electric motors and standard compass 82 ft from dynamo

Distance between dynamo or electric motors and steering compass 82 ft from dynamo

The nearest cables to the compasses are as follows:—

Cable	Carrying	Amperes	Feet from standard compass	Feet from steering compass
A cable carrying	<u>5.6</u>	<u>7</u>	<u>16</u>	<u>16</u>
A cable carrying	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>
A cable carrying	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>

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 any course in the case of the standard compass and nil degrees on any course in the case of the steering compass.

NAGASAKI WORKS, MITSUBISHI ZOSSEN KAISHA, LTD.

Builder's Signature.

Date 7th Feb 1920

GENERAL REMARKS.

This Electric Installation has been fitted in accordance with the Rules, tested, and found satisfactory.

It is submitted that this vessel is eligible for THE RECORD ELEC. LIGHT

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

Committee's Minute FRI APP 9/1920



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