

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1259

Port of **NAGASAKI** Date of First Survey **13<sup>th</sup> Sept** Date of Last Survey **25<sup>th</sup> Sept. 1919** No. of Visits **5**  
 on the ~~Iron or Steel~~ **s.s. "Delagoa Maru"** Port belonging to **Tokio**  
 Book Built at **Nagasaki** By whom **Mitsubishi Zosen Kaisha** When built **1919**  
 Owners **Nippon Zosen Kaisha** Owners' Address **Tokio**  
 No. **328** Electric Light Installation fitted by **Nagasaki Works, Mitsubishi Zosen Kaisha** When fitted **1919**.

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

One set of a compound continuous current dynamo on the same shaft 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 **In bulkhead aft of dynamo, having switches to groups 40 5 9 7** of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each **Two in fore-castle, six in midship deck house, two in steering engine house, and three in machinery space.**

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.**

Whether is vessel 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 **Five Circuits** arranged in the following groups:—

	5 cp. 16 cp. 32 cp. 500 W			
Fore Circuit	lights each of — 18. 20. 2.	candle power requiring a total current of	22. 15	Amperes
Midship "	lights each of 4. 38. 5. —	candle power requiring a total current of	25. 91	Amperes
Aft. "	lights each of 2. 37. 8. 2.	candle power requiring a total current of	21. 16	Amperes
Machy. Space "	lights each of — 56 — —	candle power requiring a total current of	11. 76	Amperes
	lights each of — — — —	candle power requiring a total current of		Amperes
Two Mast head light with <del>one double</del> lamps each of 32		candle power requiring a total current of	1. 12	Amperes
Two Side light with 4 lamps each of 32		candle power requiring a total current of	1. 12	Amperes
House Side Signal lamp with 6 lamps each of 16		" " " " " "	0. 47	"
Twelve Cargo lights of 4 x 32		candle power, whether incandescent or are lights	Incandescent	
Four " " " " 500 watt (1000		" " " " " "	Incandescent	

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 Navigating Bridge.**

## DESCRIPTION OF CABLES.

Main cable carrying 150 Amperes, comprised of 37 wires, each 14 L.S.G. diameter, 0.1906 square inches total sectional area
Branch cables carrying 25.91 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, 0.0229 square inches total sectional area
Branch cables carrying 11.76 Amperes, comprised of 7 wires, each 18 L.S.G. diameter, 0.0126 square inches total sectional area
Wires leading to lamps carrying 0.21 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, 0.0078 square inches total sectional area
Cargo light cables carrying 1.68 Amperes, comprised of 168 wires, each 38 L.S.G. diameter, 0.005 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cables and 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 wires.

Joints in cables, how made, insulated, and protected Joints in cable are made in brass pieces fitted on porcelain bases in main 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 distribution system, and cables are protected by lead cover, or galvanized iron wire armoring, 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. *Watertight 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 connector, or W. T. Combined socket switch*

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 Switchboard*

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 ZOSEN KAISHA, LTD.

*W. Shikata*  
GENERAL MANAGER.

Electrical Engineers

Date *25-10-1919.*

**COMPASSES.**

Distance between dynamo or electric motors and standard compass *108 feet from dynamo*

Distance between dynamo or electric motors and steering compass *122 "*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>5.6</i>	<i>3.2</i>	<i>7</i>	<i>9</i>
<i>✓</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>
<i>✓</i>	<i>✓</i>	<i>✓</i>	<i>✓</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 *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 ZOSEN KAISHA, LTD.

*W. Shikata*  
GENERAL MANAGER.

Builder's Signature.

Date *25-10-1919.*

**GENERAL REMARKS.**

*This Electric Lighting 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.* *J. W. D. 10/10/19.* *and W. Williamson*  
Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 11.



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