

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1240.

Port of NAGASAKI Date of First Survey 7<sup>th</sup> June Date of Last Survey 19<sup>th</sup> June 1919 No. of Visits 7  
 No. in on the ~~Iron or Steel~~ S.S. "Genoa Maru" ex "Suwayan Maru" Port belonging to Tokio  
 Reg. Book Built at Nagasaki By whom Mitsubishi Zosen Kaisha When built 1919  
 Owners Rippon Zosen Kaisha Owners' Address Tokio  
 Yard No. 317 Electric Light Installation fitted by Mitsubishi Zosen Kaisha When fitted 1919

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

One set of a compound continuous current dynamo on the same bedplate with a vertical engine  
 Capacity of Dynamo 120 Amperes at 100 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed On starboard side of 2<sup>nd</sup> deck in engine room.  
 Position of Main Switch Board On bulkhead aft of dynamo, having switches to groups 29 to 93 of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each Two in fore part and four amidships on the shelter deck; and four in machinery space.

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 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 4 Circuits arranged in the following groups:—

Group	Lights	Each of	Candle power	Requiring a total current of	Amperes
A Midship Circuit	lights each of	6, 79, 8, —	—	28.5	Amperes
B Fore "	lights each of	—, 14, 18, 1	—	25.0	Amperes
C aft "	lights each of	—, 2, 26, 1	—	32.0	Amperes
D Machy. Space "	lights each of	—, 49, —, —	—	10.5	Amperes
E	lights each of	—	—	—	Amperes
Two Mast head light with filament lamps each of	32	—	—	1.12	Amperes
Two Side light with do. lamps each of	32	—	—	1.12	Amperes
One Morse code signal lamp with 6 lamps each of	6	—	—	—	Amperes
Ten Cargo lights of	4 x 32	—	—	—	Incandescent

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 pilot bridge.

## DESCRIPTION OF CABLES.

Main cable carrying 120 Amperes, comprised of 37 wires, each 15 L.S.G. diameter, 0.1544 square inches total sectional area  
 Branch cables carrying 32.0 Amperes, comprised of 19 wires, each 18 L.S.G. diameter, 0.0350 square inches total sectional area  
 Branch cables carrying 10.5 Amperes, comprised of 7 wires, each 18 L.S.G. diameter, 0.0726 square inches total sectional area  
 Leads to lamps carrying 0.21 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, 0.0076 square inches total sectional area  
 Cargo light cables carrying 4.48 Amperes, comprised of 168 wires, each 38 L.S.G. diameter, 0.005 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

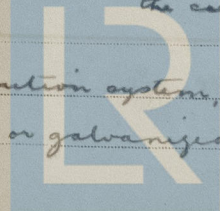
Wires/cables are composed of tinned copper insulated with pure india rubber, vulcanizing india rubber coated tape, and the whole vulcanized together, then lead covered, or lead covered and armoured with galvanized iron wire.

Joints in cables, how made, insulated, and protected Joints in cable are made in brass pieces fitted on porcelain bases in submarine board and distributing board in tank case or extension boxes 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 except one in extension box in cargo space in the cargo space.

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 With the double wire distribution system, and cables are protected by lead cover, or galvanized iron wire armoring, or galvanized iron paper.





**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 pipe, 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 wires, or galvanized iron pipe*

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

How are cables carried through decks *Galvanized iron deck tube*

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 *By galvanized iron wires, or galvanized iron pipes.*

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 *Lamps are protected by strong cast iron cover*

Where are the main switches and cut outs for these lights fitted *On bridge deck passage.*

If in the spaces, how are they specially protected *In tank case*

Are any switches or cut outs fitted in bunkers *No.*

Cargo light cables, whether portable or permanently fixed *Portable* How fixed *With fibre fork 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 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 ZOSHEN KAISHA, LTD.

*[Signature]*  
GENERAL MANAGER

Electrical Engineers

Date *9<sup>th</sup> July 1919*

**COMPASSES.**

Distance between dynamo or electric motors and standard compass *113 feet from dynamo*

Distance between dynamo or electric motors and steering compass *114 feet from dynamo*

The nearest cables to the compasses are as follows:—

A cable carrying *5.6* Amperes *7* feet from standard compass *16* feet from steering compass

A cable carrying *Amperes* feet from standard compass 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 *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 ZOSHEN KAISHA, LTD.

*[Signature]*  
GENERAL MANAGER

Builder's Signature.

Date *9<sup>th</sup> July 1919*

**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.*

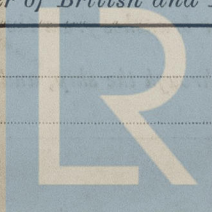
*[Signature]*  
*22/8/19*

*A.S. Williamson*

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

Committee's Minute

FRI. 5-SEP 1919



Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.