

TUE. MAY. 25 1920

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1284

Port of **NAGASAKI.** Date of First Survey **16th Feb.** Date of Last Survey **16th March 1920** No. of Visits **5**
 No. in on the ~~Iron~~ or Steel **s. s. "Dakar maru"** Port belonging to **Tokio**
 Reg. Book Built at **Nagasaki** By whom **Mitsubishi Zosen Kaisha** When built **1920**
 Owners **Nippon Yusen Kaisha** Owners' Address **Tokio**
 Yard No. **331** Electric Light Installation fitted by **Nagasaki Works Mitsubishi Zosen Kaisha** When fitted **1920**

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One set of a compound continuous current dynamo on the same bedplate 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 bulkhead aft of dynamo having switches to groups 41 to 108** of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each **Two in forecabin, two in steering engine house, five 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 **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 **Four Circuits** arranged in the following groups:—

Group	Lights	Candle Power	Current (A)	Notes
A Fore Circuit	lights each of 19, 20, 2	540	22.39	Amperes
B Midship	lights each of 4, 6, 90, 5	540	26.38	Amperes
C aft	lights each of 2, 10, 35, 2	540	26.93	Amperes
D Machy. Space	lights each of 58	540	12.18	Amperes
E One Stern light with one double filament lamp of 32	1	32	1.12	Amperes
Two Mast head light with filament lamps each of 32	2	32	1.12	Amperes
Two Side light with 32	2	32	1.12	Amperes
One Morse Code Signal lamp with 6 lamps each of 6	6	6	0.47	"
Twelve Cargo lights of 4 x 32	12	32	12.18	Incandescent
Four " " " 500 watts (1000)	4	1000	12.18	Incandescent

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

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

DESCRIPTION OF CABLES.

Cable Type	Capacity (A)	Wires	Diameter (in)	Area (sq in)
Main cable carrying	150	37	0.1906	0.114
Branch cables carrying	26.93	19	0.0351	0.004
Branch cables carrying	12.18	7	0.0126	0.001
Leads to lamps carrying	2.1	1	0.0018	0.000
Cargo light cables carrying	1.68	168	0.005	0.000

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Wires 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 cables are made in brass pieces fitted on porcelain bases in submain 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.**

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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 Combined switch socket and 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 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.

MASAKI WORKS, MITSUBISHI ZOSEN KAISHA, LTD.

Electrical Engineers

Date 13th April 1920

COMPASSES.

Distance between dynamo or electric motors and standard compass 108 ft. from Dynamo 90 ft. from wireless generator

Distance between dynamo or electric motors and steering compass 122 " " " 710 ft. " " "

The nearest cables to the compasses are as follows:—

Cable	Amperes	Feet from standard compass	Feet from steering compass
A cable carrying <u>5.6</u>	<u>7</u>	<u>9</u>	<u>9</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.

MASAKI WORKS, MITSUBISHI ZOSEN KAISHA, LTD.

Builder's Signature.

Date 13th April 1920

GENERAL REMARKS.

Wireless fitted

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**

27/5/20

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

Committee's Minute

TUE JUN. 8 1920

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.