

REPORT ON ELECTRIC LIGHTING INSTALLATION. *No. 1268.*

Port of **NAGASAKI.** Date of First Survey *17th Nov.* Date of Last Survey *26th Nov.* No. of Visits *4*
No. in Reg. Book on the ~~Iron~~ or Steel *S. S. "Durban Maru"* Port belonging to *Tokio*
Built at *Nagasaki* By whom *Mitsubishi Josen Kaisha* When built *1919*
Owners *Nippon Yusen Kaisha* Owners' Address *Tokio*
Yard No. *329* Electric Light Installation fitted by *Nagasaki Works Mitsubishi Josen 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 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 116 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 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:—

A Fore Aft lights each of 2 - 15. 22. 2 candle power requiring a total current of 22.59 Amperes

B *midship* " lights each of 8. 6 94 8. — candle power requiring a total current of 24. 41 Amperes

Cap " lights each of 2 - 10. 35 2, candle power requiring a total current of 26.93 Amperes

Dmachy Space, lights each of - - 58. - - candle power requiring a total current of 12.18 Amperes

E..... lights each of..... candle power requiring a total current of..... Amperes

Two Mast head light with ^{one double} element lamps each of 32 candle power requiring a total current of 1.12 Amperes

Two Side light with 2 lamps each of 32 candle power requiring a total current of 1.12 Amperes

One Morse Code Signal lamp with 6 lamps each of 6
Twelve Cargo lights of 44 x 32 candle power, whether incandescent or are lights incandescent.

Four " " " 500 watt (1000 " " " " " Incandescent.

If arc 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.

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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 26.93 Amperes, comprised of 19 wires, each 18 L.S.G. diameter, 0.0351 square inches total sectional area

Branch cables carrying 12.18 Amperes, comprised of 7 wires, each 18 L.S.G. diameter, 0.0726 square inches total sectional area

Leads to lamps carrying 21 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, 0.0618 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.

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 outboard 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 armouring, or galvanized iron tapes.

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 *Like 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 ZOSSEN KAISHA, LTD.

For *General Manager* *Electrical Engineers*

Date *29th Dec. 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 <i>5.6</i> Amperes <i>7</i> feet from standard compass <i>9</i> feet from steering compass
A cable carrying <i>✓</i> Amperes <i>✓</i> feet from standard compass <i>✓</i> feet from steering compass
A cable carrying <i>✓</i> Amperes <i>✓</i> feet from standard compass <i>✓</i> 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 ZOSSEN KAISHA, LTD.

For *Builder's Signature.*

Date *29th Dec. 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.

26/2/20
27 FEB. 1920

as. 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. 15.



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