

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1278.

Import of **NAGASAKI.**

Date of First Survey 6th Jan'y. Date of Last Survey 27th Jan'y. 1920 No. of Visits 6.
 No. in on the ~~Iron or Steel~~ S. S. "Atlas Maru" Port belonging to Osaka
 g. Book
 Built at Nagasaki By whom Mitsubishi Zosen Kaisha When built 1920
 Owners Osaka Shosen Kaisha Owners' Address Osaka
 Card No. 330 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 bed plate with a vertical engine.

Capacity of Dynamo 150 Amperes at 100 Volts, whether continuous or alternating current Continuous

There is Dynamo fixed On starboard side of Engine room platform.

Position of Main Switch Board On bulkhead aft of dynamo having switches to groups 20 to 80 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Two in forecabin, 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.

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 Five Circuits arranged in the following groups:—

Group	Lights each of	Candle power	requiring a total current of	Amperes
Forward Circuit	22. 10. 2.	12.82	12.82	Amperes
Midship Fore	4. 6. 44. 26. —	24.48	24.48	Amperes
" aft	38. 20. —	16.38	16.38	Amperes
" aft	2. — 7. 9. 2	9.39	9.39	Amperes
Machinery Space	57 — —	11.97	11.97	Amperes
Two Mast head light with ^{one double} lamps each of	32	1.12	1.12	Amperes
Two Side light with ^{do.} lamps each of	32	1.12	1.12	Amperes
One more signal lamp with 6 lamps each of	6	0.47	0.47	Incandescent
Four Cargo lights of <u>4 x 32</u> (200 watt) <u>400</u>				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.

Cable	Amperes	comprised of	wires, each	L.S.G. diameter	square inches total sectional area
in cable carrying	150	37	14	0.1906	✓
anch cables carrying	24.48	19	18	0.0351	✓
anch cables carrying	9.39	7	18	0.0126	✓
ads to lamps carrying	21	1	18	0.0078	✓
argo light cables carrying	1.68	168	38	0.005	✓

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 wire.

Joints in cables, how made, insulated, and protected joints in cable are made in brass pieces fitted on porcelain bases on 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 fibre connector, or W.T. combined switch socket.*

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.

S. Yamaguchi Electrical Engineers
for GENERAL MANAGER

Date *21st Feb. 1920*

COMPASSES.

Distance between dynamo or electric motors and standard compass *108 feet from dynamo and 90 feet from wireless generator*

Distance between dynamo or electric motors and steering compass *122 104*

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>7</i>	<i>9</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.

S. Yamaguchi Builder's Signature.

Date *21st Feb. 1920*

GENERAL REMARKS.

Wireless fitted.

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

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

Committee's Minute *FRI APR 9 1920*

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 12.

