

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1210

Port of NAGASAKI. Date of First Survey 14th hour. Date of Last Survey 26th hour 1918 No. of Visits 5
 No. in Reg. Book on the ~~Iron~~ Steel s.s. "Kohnan Maru" Port belonging to Kobe
 Built at Nagasaki KONAN MARU By whom Mitsubishi Zosen Kaisha When built 1918
 Owners Kobe Sanbishi Kaishiki Kaisha Owners' Address Kobe
 Yard No. 277 Electric Light Installation fitted by Mitsubishi Zosen Kaisha When fitted 1918

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 120 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 sharing switches to groups 26 to 67 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Two in fore part and three in after part of Bridge deck; two in fore part, one amidships, and one in after part of upper deck; three in engine room; and one in Boiler 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 4 Circuits arranged in the following groups:—

Group	Description	Lights	Candle Power	Current (Amperes)
A	Bridge deck Circuit	3	56	20.8
B	Fore "	16	16	29.8
C	after "	1	22	32.2
D	Engine room "	61		12.9
E	lights each of			
	Two Mast head light with ^{one double} filament lamps each of	32		1.12
	Two Side light with " lamps each of	32		1.12
	one Morse code signal lamp	6 x 6		1.26
	Two Cargo lights of	4 x 32		
	Two " " "	1000		

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 32.2 Amperes, comprised of 19 wires, each 18 L.S.G. diameter, 0.0357 square inches total sectional area

Branch cables carrying 12.9 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, 0.0229 square inches total sectional area

Leads to lamps carrying 56 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, 0.0018 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 varnished 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 submain 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 cast iron cover 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 armouring, 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 Protected by 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 pipe

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 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 Yes.

If so, how are they protected By galvanized iron wires, or galvanized iron pipe.

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 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 ZOSEN KAISHA, LTD.

I. Kasey
GENERAL MANAGER. Electrical Engineers

Date 30th Nov. 1918

COMPASSES.

Distance between dynamo or electric motors and standard compass 138 ft. from dynamo.
24 ft. from wireless motor generator

Distance between dynamo or electric motors and steering compass 112 ft. from dynamo.
24 ft. from wireless motor generator

The nearest cables to the compasses are as follows:—

A cable carrying <u>56</u> Amperes	<u>7</u> feet from standard compass	<u>14</u> 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 ZOSEN KAISHA, LTD.

I. Kasey
GENERAL MANAGER. Builder's Signature.

Date 30th Nov. 1918

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.

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

Committee's Minute FRI. 17 JAN. 1919



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Nagasaki Office

REPORT FORM No. 13.