

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1210

Port of **NAGASAKI.** Date of First Survey 14th Nov. Date of Last Survey 26th Nov. 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	Lights	Each of	Candle power	requiring a total current of	Amperes
A Bridge deck Circuit	lights each of	3, 56, 8		20.8	Amperes
B Fore	lights each of	16, 16, 1		29.8	Amperes
C After	lights each of	1, 24, 1		32.2	Amperes
D Engine room	lights each of	61		12.9	Amperes
E	lights each of				Amperes
Two Mast head light with ^{one double} filament lamps each of		32		1.12	Amperes
Two Side light with " lamps each of		32		1.12	Amperes
One Morse code signal lamp		6 x 6		1.26	"
Two Cargo lights of		4 x 32			"
Two " " "		1000			" (Nite)

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.

Cable Type	Amperes	Comprised of	Wires	Each	L.S.G. diameter	Square inches total sectional area
Main cable carrying	120	37	wires	each	15	0.1544
Branch cables carrying	32.2	19	wires	each	18	0.0351
Branch cables carrying	12.9	7	wires	each	16	0.0229
Leads to lamps carrying	56	1	wires	each	18	0.0018
Cargo light cables carrying	4.48	168	wires	each	38	0.005

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 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 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 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.

[Signature] 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 <i>5.6</i> Amperes	<i>7</i> feet from standard compass	<i>144</i> 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.

[Signature] 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. *ASD 11/1/19*

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.