

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 272

Port of Nagasaki Date of First Survey 10.10.02 Date of Last Survey 3.3.03 No. of Visits 30  
 No. in on the Iron or Steel Swm S.S. "Aki Maru" Port belonging to Tokyo  
 Reg. Book Built at Nagasaki By whom Mr. Mitsui Bishi N.Y.E. Works When built 1903  
 Owners Mr. Nippon Yusen Kaisha Owners' Address Tokyo  
 Yard No. 142 Electric Light Installation fitted by Mr. Mitsui Bishi Dockyard Tokyo When fitted 1903

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two sets of a compound wound direct current dynamo, mounted on the same bed plate as, and directly coupled to a vertical compound engine

Capacity of Dynamo Each 400 Amperes at 65 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Both in thrust-block recess

Position of Main Switch Board Engine room after bulkhead on top platform having switches to groups 2 to 76 of lights, &c., as below

Positions of auxiliary switch boards, and numbers of switches on each Fore-castle, lamp room, passages to sailor room, firemen room, Midship, Promenade deck, Wheel house, Bar room, Bridge deck, Port & Starboard, Corridors of Social Hall, Corners of Passages on Port & Starboard, Main deck, Corners of all Saloons on Port & Starboard, Passages of Engineers, Officers cabin, European pantry, Bulkhead of Saloon, Poop, 2nd class pantry, Wall of 3rd class pantry, passage and glass state room, Engine room, Thrust block recess, Fore & Aft Bulkhead.

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, with the exception of extension boxes from which it is branched 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, exclusive of lamp circuit

Are the cut outs of non-oxidizable metal yes and constructed to fuse at an excess of not more than 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 on the inside of submainboard cover.

Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 391 arranged in the following groups:—

A Fore-castle	35 lights, each of 26-16cp & 9-50cp	candle power requiring a total current of	46.58 Amperes
A Searchlight	One Diesel Canal Searchlight and one arc lamp	" " " "	75.00
B Fore Hold	20 lights, each of 20-50	candle power requiring a total current of	53.80 Amperes
B Poop	57 " " " 51-16cp & 6-50cp	" " " "	60.00
C After Hold	16 lights each of 50	candle power requiring a total current of	43.04 Amperes
C Promenade Deck	37 " " " 25-16cp, 4-32cp & 8-50cp	" " " "	49.90
D Midship Starboard	73 lights each of 71-16cp & 2-8cp	candle power requiring a total current of	61.92 Amperes
D Midship Port	75 " " " 73-16cp & 2-50cp	" " " "	68.16
E Engine Room	76 lights each of 74-16cp & 2-50	candle power requiring a total current of	69.02 Amperes
Fore & Main Mast head lights	each One special double filament lamps each of 32	candle power requiring a total current of	3.44 Amperes
Both Side lights	each One special double filament lamps each of 32	candle power requiring a total current of	3.44 Amperes
10 Cargo lights	of 50x4=200	candle power, whether incandescent or arc lights	Incandescent lamp

If arc lights, what protection is provided against fire, sparks, &c. with Hexagonal lantern

Where are the switches controlling the masthead and side lights placed in wheelhouse on Bridge deck

## DESCRIPTION OF CABLES.

Main cable carrying	355.58-171.84 Amperes, comprised of	37 wires, each #12	L.S.G. diameter, 0.3217	square inches total sectional area
Branch cables carrying	75-61.92 Amperes, comprised of	19 wires, each #15	L.S.G. diameter, 0.0789	square inches total sectional area
Branch cables carrying	53.8-17.2-15.48 Amperes, comprised of	19 wires, each #20	L.S.G. diameter, 0.0624	square inches total sectional area
Leads to lamps carrying	13.76-9.46 Amperes, comprised of	7 wires, each #18	L.S.G. diameter, 0.0128	square inches total sectional area
Leads to lamps carrying	86.2-38 Amperes, comprised of	1 wires, each #16	L.S.G. diameter, 0.0032	square inches total sectional area
Cargo light cables carrying	43-0.86 Amperes, comprised of	1 wires, each #18	L.S.G. diameter, 0.0018	square inches total sectional area
Cargo light cables carrying	10.76 Amperes, comprised of	112 wires, each #30	L.S.G. diameter, 0.0125	square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

The whole cables & wires used in the installation are covered with pure and vulcanized india rubber, india rubber coated tape the whole vulcanized together, braided cotton & then covered preservative compound. The cables which are liable to be exposed to moisture or mechanical injury are protected with iron casing & which liable to heat are armoured with galvanized iron wires, fashioned to bulkhead or deck with clips and screws.

Joints in cables, how made, insulated, and protected. All joints are made in brass terminal pieces fitted in extension boxes, distributing boards, submainboards. Few joints of #16 & #18 wires are made in casing, being thoroughly soldered, and covered with india rubber & india 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 in accessible positions. None in bunkers but some in cargo spaces &c.

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 By multiple board double wired system, and they are protected with wood casings, iron pipes, galv. iron wire & lead armoured.



