

TUE. 20 JUN. 1916

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Received at London Office

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1801

Port of Kobe Date of First Survey 13 Feb Date of Last Survey 18 April No. of Visits 9
 Name of Ship I. S. S. "Tajima Maru" Port belonging to Tokio
 Built at Kobe By whom The Kawasaki Dry Dock Co. Ltd. When built 1916
 Owners The Nippon Yusen Kaisha Owners' Address Tokio
 No. 380 Electric Light Installation fitted by The Kawasaki Dry Dock Co. Ltd. When fitted 1916

DESCRIPTION OF DYNAMO, ENGINE, ETC.

The generating set consists of an automatic cut off vertical single cylinder enclosed engine, capable of working with 15 k.w. open multi-pole type compound wound dynamo.

Capacity of Dynamo 15 k.w. 150 Amperes at 100 Volts, whether continuous or alternating current Continuous current.

Where is Dynamo fixed in engine room Whether single or double wire system is used double wire system.

Position of Main Switch Board in engine room having switches to groups 5 switches of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Distribution box with a switch; 1 on pilot bridge; 2 on bridge deck; 2 on upper deck; 2 in engine & boiler room.

Are cut outs 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 yes.

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 100 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 205 arranged in the following groups:—

A	80	lights each of	16	candle power requiring a total current of	39.3	Amperes	
B	89	lights each of	5, 16 & 32	candle power requiring a total current of	35	Amperes	
C	36	lights each of	5, 16 & 32	candle power requiring a total current of	17	Amperes	
D		lights each of		candle power requiring a total current of		Amperes	
E		lights each of		candle power requiring a total current of		Amperes	
	2	Mast head light with	2 lamps each of	32	candle power requiring a total current of	2.2	Amperes
	2	Side light with	2 lamps each of	32	candle power requiring a total current of	2.2	Amperes
	16	Cargo lights of	{ 14: 200 2: 500	candle power, whether incandescent or arc lights	14: 200 ^W incandescent. 2: 500 ^W arc.		

If arc lights, what protection is provided against fire, sparks, &c. enclosed type.

Where are the switches controlling the masthead and side lights placed in chart room.

DESCRIPTION OF CABLES.

Main cable carrying 150 Amperes, comprised of 150 wires, each #20 L.S.G. diameter, 0.1527 square inches total sectional area

Branch cables carrying 39.3 Amperes, comprised of 50 wires, each #20 L.S.G. diameter, 0.0509 square inches total sectional area

Branch cables carrying 5.5 Amperes, comprised of 7 wires, each #20 L.S.G. diameter, 0.0071 square inches total sectional area

Leads to lamps carrying 0.5 Amperes, comprised of 1 wires, each #18 L.S.G. diameter, 0.0018 square inches total sectional area

Cargo light cables carrying 7 Amperes, comprised of 283 wires, each #38 L.S.G. diameter, 0.0080 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

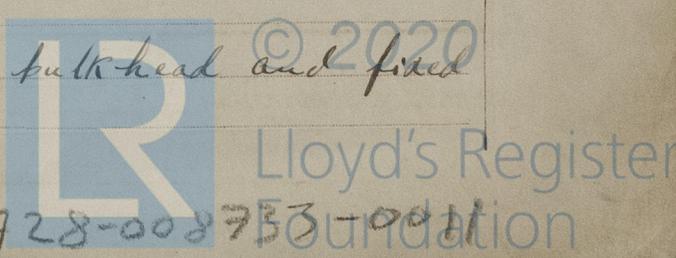
Armoured rubber insulated lead covered wire, lead covered rubber insulated wire and cotton braided rubber insulated wire are used.

Joints in cables, how made, insulated, and protected joints in cables are made on small marble plates in water proof junction boxes.

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 They led along deck or bulk-head and fixed with brass bands, if necessary on iron plates.



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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 steel armoured lead covered wires are used.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat galvanized steel armoured lead covered wires are used.

What special protection has been provided for the cables near boiler casings galvanized steel armoured lead covered wires are used.

What special protection has been provided for the cables in engine room galvanized steel armoured lead covered wires are used.

How are cables carried through beams through lead tubes through bulkheads, &c. through lead glands.

How are cables carried through decks through water tight glands.

Are any cables run through coal bunkers no or cargo spaces no or spaces which may be used for carrying cargo, stores, or baggage yes.

If so, how are they protected galvanized steel armoured lead covered wires are used.

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage with iron cover or brass guard

If so, how are the lamp fittings and cable terminals specially protected micawite or porcelain insulation are used.

Where are the main switches and cut outs for these lights fitted in distribution boxes out side of these spaces.

If in the spaces, how are they specially protected none.

Are any switches or cut outs fitted in bunkers none.

Cargo light cables, whether portable or permanently fixed portable How fixed by socket in cargo light boxes.

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel none.

How are the returns from the lamps connected to the hull none.

Are all the joints with the hull in accessible positions none.

The installation is supplied with a voltmeter and an amperemeter, fixed on main switch board.

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 copper used is guaranteed to have a conductivity of 98 per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 1000 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.

Electrical Engineers Date

COMPASSES.

Distance between dynamo or electric motors and standard compass 120 feet from main dynamo and 48 feet from wireless motor generator.

Distance between dynamo or electric motors and steering compass 160 feet from main dynamo and 148 feet from wireless motor generator.

The nearest cables to the compasses are as follows:—

A cable carrying	<u>5</u>	Amperes	<u>8</u>	feet from standard compass	<u>155</u>	feet from steering compass
A cable carrying	<u>20</u>	Amperes	<u>21</u>	feet from standard compass	<u>152</u>	feet from steering compass
A cable carrying	<u>7.3</u>	Amperes	<u>10.8</u>	feet from standard compass	<u>9</u>	feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power no

The maximum deviation due to electric currents, etc., was found to be no degrees on no course in the case of the standard compass and no degrees on no course in the case of the steering compass.

J. O. Takane Builder's Signature. Date

GENERAL REMARKS.

The installation has been fitted under survey & found satisfactory & the vessel is in my opinion eligible for the record "Elec. light"

It is submitted that this vessel is eligible for THE RECORD Elec. light. Arthur L. Jones Surveyor to Lloyd's Register of British and Foreign Shipping. J.W.D. 20/6/16.

Committee's Minute FRI. 7-JUL. 1916



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.