

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1350

Port of Kobe Date of First Survey 20 June Date of Last Survey 22nd Oct No. of Visits 15
 No. in Reg. Book 6, Sup. on the ~~Iron~~ Steel J. S. S. "Kashima Maru" Port belonging to Tokio
 Built at Kobe By whom Kawasaki Dockyard Co. Ltd When built 1913
 Owners Nippon Yusen K. Kaisha Owners' Address Tokio
 Yard No. 362 Electric Light Installation fitted by Kawasaki Dockyard Co. Ltd When fitted 1913

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two sets of compound wound dynamo coupled to compound engine.
 Capacity of Dynamo 65 K.W. & 650 Amperes at 100 Volts, whether continuous or alternating current Continuous current
 Where is Dynamo fixed 2nd deck, starboard Whether single or double wire system is used Double wire system
 Position of Main Switch Board Dynamo room, having switches to groups 17 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each 1 in workshop room, 1 in clarion room

If cut outs are fitted on main switch board to the cables of main circuit fitted for each and on each auxiliary switch board to the cables of auxiliary circuits fitted for each and at each position where a cable is branched or reduced in size fitted for each and to each lamp circuit fitted for each
 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 fitted for each
 Are the cut outs of non-oxidizable metal non-oxidizable metal 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 of standard diam. If wire fuses are used
Yes are permanent instructions fitted on or near each switch board giving particulars of proper size of fuse for each circuit fitted
 Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases fitted on marble plate

Total number of lights provided for 723 arranged in the following groups:—

A <u>Bed ceiling & bracket</u> lights each of <u>15</u>	candle power requiring a total current of <u>300</u>	Amperes
B <u>Deck light</u> lights each of <u>50</u>	candle power requiring a total current of <u>6.2</u>	Amperes
C <u>Search</u> lights each of <u>16000</u>	candle power requiring a total current of <u>65</u>	Amperes
D <u>Compass & telegraph</u> lights each of <u>8</u>	candle power requiring a total current of <u>1.5</u>	Amperes
E <u>Signal</u> lights each of <u>(7x5)</u>	candle power requiring a total current of <u>1.1</u>	Amperes
<u>Mast head light with 2 lamps each of 32</u>	candle power requiring a total current of <u>2</u>	Amperes
<u>Side light with 2 lamps each of 32</u>	candle power requiring a total current of <u>2</u>	Amperes
<u>12 Cargo lights of 200</u>	candle power, whether incandescent or arc lights <u>incandescent lamp</u>	

If arc lights, what protection is provided against fire, sparks, &c. Enclosed type arc lamps are used 10 amp 80 Volts.

Where are the switches controlling the masthead and side lights placed on boat deck.

DESCRIPTION OF CABLES.

Main cable carrying 65 Amperes, comprised of 80 wires, each 20 L.S.G. diameter, 0.0864 square inches total sectional area
 Branch cables carrying 10 Amperes, comprised of 10 wires, each 20 L.S.G. diameter, 0.0108 square inches total sectional area
 Branch cables carrying " Amperes, comprised of " wires, each " L.S.G. diameter, " square inches total sectional area
 Leads to lamps carrying 0.25 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, 0.0018 square inches total sectional area
 Cargo light cables carrying 6.5 Amperes, comprised of 20 wires, each 20 L.S.G. diameter, 0.0216 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

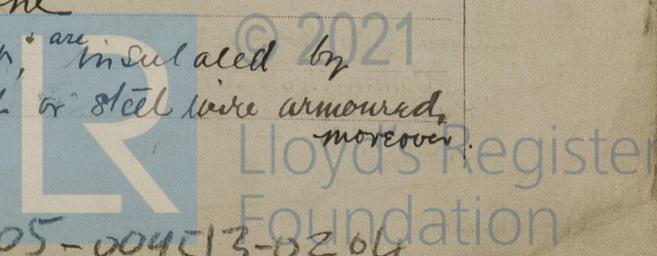
Conductors insulated with india rubber & vulcanized rubber & tape. Cables armoured or lead covered according to requirements.

Joints in cables, how made, insulated, and protected Joints in cable made by junction, box, switches are rest on the marble plates.

Are all the joints of cables thoroughly soldered, resin only having been used as a flux Resin not used 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 All joint made to rule.

Are there any joints in or branches from the cable leading from dynamo to main switch board None

How are the cables led through the ship, and how protected They run on wooden sheen, are insulated by vulcanized rubber of the best quality and lead covered or steel wire armoured, moreover.



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 lead covered

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Cables run through the place where no special protection required

What special protection has been provided for the cables near boiler casings Some of them run through iron pipes

What special protection has been provided for the cables in engine room Armoured cables

How are cables carried through beams They are led through sheet lead through bulkheads, &c. led through hard wood

How are cables carried through decks led through hard wood.

Are any cables run through coal bunkers None or cargo spaces yes or spaces which may be used for carrying cargo, stores, or baggage yes

If so, how are they protected protected by sheet iron.

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage Iron covered light in cargo space

If so, how are the lamp fittings and cable terminals specially protected Protected by guards or iron cover.

Where are the main switches and cut outs for these lights fitted Distribution box with fuses fitted on bulkhead.

If in the spaces, how are they specially protected Cargo light boxes are protected by iron cover.

Are any switches or cut outs fitted in bunkers None

Cargo light cables, whether portable or permanently fixed Portable How fixed on hangers

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel double wire system is used.

How are the returns from the lamps connected to the hull do.

Are all the joints with the hull in accessible positions yes.

The installation is supplied with a voltmeter and an amperemeter, fixed on 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 None

Are any switches, cut outs, or joints of cables fitted in the pump room or companion None.

How are the lamps specially protected in places liable to the accumulation of vapour or gas None.

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 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.

S. Yamato Electrical Engineers Date Oct. 22nd 1913.

COMPASSES.

Distance between dynamo or electric motors and standard compass 208 feet from main dynamo, 112 feet from Clayton motor.

Distance between dynamo or electric motors and steering compass 192 " " " " , 190 " " " "

The nearest cables to the compasses are as follows:—

A cable carrying	<u>6</u>	Amperes	<u>1.6</u>	feet from standard compass	<u>250</u>	feet from steering compass
A cable carrying	<u>6.5</u>	Amperes	<u>11.2</u>	feet from standard compass	<u>190</u>	feet from steering compass
A cable carrying	<u>5</u>	Amperes	<u>230</u>	feet from standard compass	<u>20</u>	feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power Distances are negligible.

The maximum deviation due to electric currents, etc., was found to be " degrees on " course in the case of the standard compass and " degrees on " course in the case of the steering compass.

Kawasaki Dockyard Co., Ltd. Builder's Signature. Date

Per [Signature] Business Manager

The installation has been satisfactorily fitted & worked well on trial.

It is submitted that this vessel is eligible for THE RECORD. Elec. light. [Signature] Arthur L. Jones
 Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute NOV. 18. 1913

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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