

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2867.

Port of Kobe Date of First Survey 1 April Date of Last Survey 14 April No. of Visits 6
 No. in Reg. Book 55 on the Iron Steel SS steam JAIHO MARU No. 1 Port belonging to Mikata: Wakayama
 Built at Joba, Mie prefecture By whom Joba Shipyard When built 1919
 Owners Hayashi Kisen Kabushiki Kaisha Owners' Address Osaka, Japan
 Yard No. 55 Electric Light Installation fitted by Joba Shipyard When fitted 1919

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Direct current open type compound generator which is directly coupled with high speed engine.

Capacity of Dynamo 75 kW. 68 Amperes at 110 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed In the Engine Room

Position of Main Switch Board By the side of dynamo having switches to groups Five sets of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each no auxiliary switchboard.

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 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 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 147 arranged in the following groups:—

Group	Description	Number of Lights	Current (Amperes)
A	Jungsten lamp	75 lights each of 16	candle power requiring a total current of 15 Amperes
B	Carbon lamp	2 lights each of 32	candle power requiring a total current of 1.6 Amperes
C	Carbon lamp	21 lights each of 16	candle power requiring a total current of 8.5 Amperes
D	Carbon lamp	7 lights each of 5	candle power requiring a total current of 1.1 Amperes
E	Mast head light with 2 lamps each of 32	2	candle power requiring a total current of 12.2 Amperes
	Side light with 2 lamps each of 32	2	candle power requiring a total current of 3.2 Amperes

8 Cargo lights of Carbon lamp 4 x 16 candle power, whether incandescent or arc lights Incandescent
2 Swanho 500 WATTS. No arc lamp

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

DESCRIPTION OF CABLES.

Description	Amperes	Wires	S.W.G.	L.S.G. diameter	Total sectional area
Main cable carrying	<u>74</u>	<u>60</u>	<u>20</u>	<u>.06</u>	<u>square inches</u>
Branch cables carrying	<u>23</u>	<u>7</u>	<u>20</u>	<u>.019</u>	<u>square inches</u>
Branch cables carrying	<u>8.5</u>	<u>11</u>	<u>20</u>	<u>.007</u>	<u>square inches</u>
Leads to lamps carrying	<u>13</u>	<u>1</u>	<u>18</u>	<u>.011</u>	<u>square inches</u>
Cargo light cables carrying	<u>2</u>	<u>1</u>	<u>18</u>	<u>.0018</u>	<u>square inches</u>
	<u>3.5</u>	<u>1</u>	<u>16</u>	<u>.003</u>	<u>square inches</u>

DESCRIPTION OF INSULATION, PROTECTION, ETC.

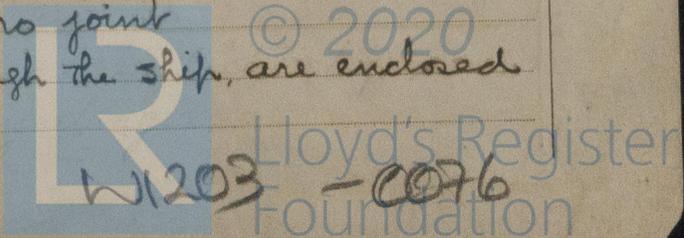
All the cables are lead covered and perfectly protected inserted in steel tubes

Joints in cables, how made, insulated, and protected Joints in branches are made in properly constructed water tight junction box.

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 joint

How are the cables led through the ship, and how protected The cable led through the ship, are enclosed in steel tubes protected from any danger.



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 wire or cables which are protected by tubes are used in such places.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat By lead covered fitting

What special protection has been provided for the cables near boiler casings By lead covered fitting

What special protection has been provided for the cables in engine room By lead covered fitting

How are cables carried through beams By lead tube through bulkheads, &c. By iron pipe

How are cables carried through decks By water tight pipe

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

If so, how are they protected By lead covered fitting

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

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

The copper used is guaranteed to have a conductivity of 99.5 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.

K. Inoue. Electrical Engineers Date June 1919

COMPASSES.

Distance between dynamo or electric motors and standard compass Over 60 feet

Distance between dynamo or electric motors and steering compass Over 80 feet.

The nearest cables to the compasses are as follows:—

A cable carrying	<u>8.5</u>	Amperes	<u>3</u>	feet from standard compass	<u>over 100</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 1/2 degrees on 1/2 course in the case of the standard compass and 1/2 degrees on 1/2 course in the case of the steering compass.

Builder's Signature. Date

GENERAL REMARKS.

The installation has been fitted in accordance with the Rules requirements & worked satisfactorily on trial.

W. Rawson.
Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute FRI. SEP. 3 1920

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM NO. 13.

MACHINERY DRAWN AND WRITTEN.

