

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 4606.

Port of Kobe Date of First Survey 8/4/24 Date of Last Survey 24/7/24 No. of Visits 7
 No. in on the ~~Iron~~ Steel SS "KOSHIN MARU" Port belonging to Kobe
 Reg. Book Built at Yamashina By whom Osaka Iron Works When built 1924
 Owners Hiroumi Shoji Kabushiki Kaisha Owners' Address ✓
 Yard No. 918 Electric Light Installation fitted by Osaka Iron Works When fitted 1924

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Compound wound dynamo direct coupled to single cylinder, vertical, enclosed, steam engine.
 Capacity of Dynamo 150 Amperes at 100 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Starb. side of E.R. lower platform Whether single or double wire system is used double
 Position of Main Switch Board Starb. side of E.R. on store bulkhead having switches to groups A, B, C, D & E of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each 6 auxiliary switches on main switch board.

If fuses 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 fuses fitted to both flow and return wires or cables of all circuits including lamp circuits ✓
 Are the fuses of non-oxidizable metal Yes and constructed to fuse at an excess of 50 per cent over the normal current
 Are all fuses 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 fuses constructed of incombustible materials and fitted on incombustible bases Yes

Total number of lights provided for 159 arranged in the following groups:—

A <u>Mach. Space</u>	<u>53</u> lights each of	<u>16</u>	candle power requiring a total current of	<u>10.6</u> Amperes
B <u>Crew Space</u>	<u>80</u> lights each of	<u>16</u>	candle power requiring a total current of	<u>16.8</u> Amperes
C <u>Navigation</u>	<u>8</u> lights each of	<u>16 & 32</u>	candle power requiring a total current of	<u>5.8</u> Amperes
D <u>Aft. Cargo</u>	<u>10</u> lights each of	<u>16</u>	candle power requiring a total current of	<u>16.0</u> Amperes
E <u>Fore Cargo</u>	<u>8</u> lights each of	<u>16</u>	candle power requiring a total current of	<u>14.0</u> Amperes
<u>2</u>	Mast head light with <u>1</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>2.12</u> Amperes
<u>2</u>	Side light with <u>1</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>2.12</u> Amperes
<u>18</u>	Cargo lights <u>14 clusters and 4 nitrogen</u>		candle power, whether incandescent or arc lights <u>incandescent</u>	

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

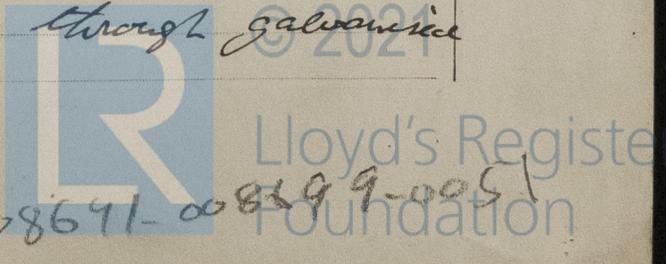
Where are the switches controlling the masthead and side lights placed In Chart Room.

DESCRIPTION OF CABLES.

Main cable carrying	<u>150</u> Amperes, comprised of	<u>80</u> wires, each	<u>18</u> S.W.G. diameter, <u>0.14480</u> square inches total sectional area
Branch cables carrying	<u>10.6 & 16.8</u> Amperes, comprised of	<u>11</u> wires, each	<u>21</u> S.W.G. diameter, <u>0.00884</u> square inches total sectional area
Branch cables carrying	<u>7.4</u> Amperes, comprised of	<u>7</u> wires, each	<u>21</u> S.W.G. diameter, <u>0.00566</u> square inches total sectional area
Leads to lamps carrying	<u>0.2</u> Amperes, comprised of	<u>1</u> wires, each	<u>18</u> S.W.G. diameter, <u>0.00181</u> square inches total sectional area
Cargo light cables carrying	<u>14.0</u> Amperes, comprised of	<u>11</u> wires, each	<u>21</u> S.W.G. diameter, <u>0.00884</u> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Vulcanised rubber; armoured or lead covered as necessary.
 Joints in cables, how made, insulated, and protected Mechanical joints, insulated with porcelain & slate bases, & protected in cast-iron boxes.
 Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances 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 Armoured wire, led through galvanised 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 *Galvanized iron pipes*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Armoured wire*

What special protection has been provided for the cables near boiler casings *Armoured wire*

What special protection has been provided for the cables in engine room *Armoured wire & galvanized iron pipes*

How are cables carried through beams *Lead bushes* through bulkheads, &c. *W.T. glands*

How are cables carried through decks *Flanged, galvanized iron pipes*

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 *Armoured wire, or through galvanized iron pipes.*

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 fuses for these lights fitted *✓*

If in the spaces, how are they specially protected *✓*

Are any switches or fuses 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 *✓*

Is the installation supplied with a voltmeter *Yes*, and with an amperemeter *Yes*, fixed on switchboard *✓*

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and fuses fitted in positions not liable to the accumulation of petroleum vapour or gas *✓*

Are any switches, fuses, 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 not less than that of the Engineering Standards Committee's standard, and the wires are protected by tinning from the sulphur compounds present in the insulating material.

Insulation of cables is guaranteed to have a resistance of not less than *500* megohms per statute mile at 60° Fahrenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than 500 volts and while the cable is still immersed.

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.

Y. Kijozumi Electrical Engineers Date _____

COMPASSES.

Distance between dynamo or electric motors and standard compass *95'-0" above*

Distance between dynamo or electric motors and steering compass *150'-0" "*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>4.8</i>	<i>16</i>		
<i>2.12</i>	<i>7</i>		

Have the compasses been adjusted with and without the electric installation at work at full power _____

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.

H. Sasaka Builder's Signature. Date _____

GENERAL REMARKS.

This installation fitted in accordance with the requirements of the Rules. The materials & workmanship are good, and the installation was found satisfactory when tried under full working conditions. This vessel is eligible in my opinion for the notation "Elec. Light."

It is submitted that this vessel is eligible for Fee £ 225. THE RECORD. Elec. Light. *J.W.D.* Surveyor to Lloyd's Register of Shipping.

Committee's Minute

NOV 14 1924

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



© 2021

Lloyd's Register Foundation