

REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 2499

Port of Jokohama Date of First Survey May 20th Date of Last Survey June 26th 1919 No. of Visits 1
 No. in Reg. Book on the Iron or Steel 88 Koyo Maru Port belonging to Jokohama
 Built at Uraga By whom Uraga Dock Co When built 1919
 Owner's Joyo Kisen Kaisha Owners' Address Jokohama
 Yard No. 146 Electric Light Installation fitted by Uraga Dock Co When fitted 1919

DESCRIPTION OF DYNAMO, ENGINE, ETC.

1-15 H.P. generator direct connected to reciprocating engine

Capacity of Dynamo 150 Amperes at 100 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Bottom platform E.R. Whether single or double wire system is used double
 Position of Main Switch Board near generator Having switches to groups 4 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Forecastle 1 (15) Amidships 4 (10).
 Engine room 3 (10) Aft. 1 (8).

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 yes

Are the fuses of non-oxidisable metal yes and constructed to fuse at an excess of 80% 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

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 192 arranged in the following groups:—

A	32	lights each of	16-32-50	candle power requiring a total current of	82	Amperes
B	56	lights each of	11	candle power requiring a total current of	25	Amperes
C	70	lights each of	16-50	candle power requiring a total current of	24	Amperes
D	28	lights each of	16-50	candle power requiring a total current of	31	Amperes
E	Trunks	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	1.2
2	Side light with	2	lamps each of	32	candle power requiring a total current of	1.2
5	Cargo lights of		128	candle power, whether incandescent or arc lights	incandescent	

If arc lights, what protection is provided against fire, sparks, &c. 114

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

DESCRIPTION OF CABLES.

Main cable carrying 150 Amperes, comprised of 60x3 wires, each 20 S.W.G. diameter, 3x006 square inches total sectional area
 Branch cables carrying 30 Amperes, comprised of 30 wires, each 20 S.W.G. diameter, 0.03 square inches total sectional area
 Branch cables carrying 15 Amperes, comprised of 15 wires, each 20 S.W.G. diameter, 0.013 square inches total sectional area
 Leads to lamps carrying 1 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, 0.0018 square inches total sectional area
 Cargo light cables carrying 7 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, 0.007 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Lead covered & armoured cable

Joints in cables, how made, insulated, and protected Joint blocks 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 cable + pipes



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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 *armoured cable*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *armoured cable + pipes*

What special protection has been provided for the cables near boiler casings *armoured cable + pipes*

What special protection has been provided for the cables in engine room *armoured cable*

How are cables carried through beams *pipes* through bulkheads, &c. *pipes*

How are cables carried through decks *pipes*

Are any cables run through coal bunkers *yes* or cargo spaces *yes* or spaces which may be used for carrying cargo, stores, or baggage *yes*

If so, how are they protected *Armoured cable + pipes*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *yes*

If so, how are the lamp fittings and cable terminals specially protected *Air tight fittings*

Where are the main switches and fuses for these lights fitted *amidships*

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 *in the hold*

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 *600* 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.

U. Kammura Electrical Engineers

Date *JUL 11 1919*

COMPASSES.

Distance between dynamo or electric motors and standard compass

88 feet

Distance between dynamo or electric motors and steering compass

74 feet

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>9</i>	<i>9</i>	<i>8</i>	
<i>7</i>	<i>19</i>	<i>13</i>	

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 *nil* degrees on *every* course in the case of the standard compass and *nil* degrees on *every* course in the case of the steering compass.

U. Kammura Builder's Signature.

Date *JUL 11 1919*

GENERAL REMARKS. *The installation of this vessel has been fitted in accordance with the Society's Rules, the material and workmanship are good, tried under working condition and found satisfactory.*

It is submitted that this vessel is eligible for THE RECORD. Elec. light.

F. B. Archbold

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. DEC. 7 1923



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