

TUE 13 NOV 1917

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2290

Port of YOKOHAMA Date of First Survey 15<sup>th</sup> Sept Date of Last Survey 30<sup>th</sup> Sept No. of Visits 4  
 No. in XXXX on the Iron or Steel S/S KOFUKU MARU Port belonging to URAGA  
 Reg. Book Built at URAGA By whom URAGA DOCK Co. Ltd. When built 1917  
 Owners Kiyoumi Kinsaburo & Co. Owners' Address Osaka  
 Yard No. 135 Electric Light Installation fitted by URAGA DOCK Co. Ltd. When fitted 1917

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

One 10 KW set:-D.A. Sing. Cyl. Steam engine coupled to 6 Pole, Comp. Generator.  
 One 6 K.W. set:- D.A. Single Cyl. Steam engine coupled to 6 Pole Comp. Generator.  
 Capacity of Dynamo 91 & 55 Amperes at 110 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed Middle platform Engine Room Whether single or double wire system is used Double  
 Position of Main Switch Board at Dynamo having switches to groups Four in number of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each Forecastle I of 10 Poop I of 3 Engine & Boiler  
Rooms 2 of 10 Saloon pantry 2 of 10 Chart Room 1 of 10 Bridge Deck port Engineers' messroom  
I of 10 Bridge deck 2nd Engineers' Room I of 10

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-oxidizable metal Tinlead alloy and constructed to fuse at an excess of 30% per cent over the normal current

Are all fuses fitted in easily accessible positions Yes Are the fuses of standard dimensions Mains only 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 = 118 of 16 C. P. arranged in the following groups:-

A	29	lights each of	16 C.P.	candle power requiring a total current of	14.5	Amperes
B	19	lights each of	16 C.P.	candle power requiring a total current of	9.5	Amperes
C	28 of 16 C.P.	lights each of and 4 of 32 C.P.		candle power requiring a total current of	18.0	Amperes
D	34	lights each of	16 C.P.	candle power requiring a total current of	17.0	Amperes
E		lights each of		candle power requiring a total current of	Total. 59.00	Amperes
2	Mast head light with	1	lamps each of	32	candle power requiring a total current of	One
2	Side light with	1	lamps each of	32	candle power requiring a total current of	One
Eight	Cargo lights of	4	lamps of 16.	candle power, whether incandescent or arc lights	Incandescent	

If arc lights, what protection is provided against fire, sparks, &c. No arc lamps fitted.

Automatic circuit breaker fitted to Main Switch of Switch Board.

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

## DESCRIPTION OF CABLES.

Main cable carrying	59	Amperes, comprised of	30	wires, each	No. 20	S.W.G. diameter,	.030	square inches total sectional area
Branch cables carrying	17.0	Amperes, comprised of	15	wires, each	No. 20	S.W.G. diameter,	.015	square inches total sectional area
Branch cables carrying	14.5	Amperes, comprised of	15	wires, each	No. 20	S.W.G. diameter,	.015	square inches total sectional area
Branch cables carrying	9.5	Amperes, comprised of	15	wires, each	No. 20	S.W.G. diameter,	.015	square inches total sectional area
Leads to lamps carrying	18.0	Amperes, comprised of	15	wires, each	No. 20	S.W.G. diameter,	.015	square inches total sectional area
Cargo light cables carrying	5	Amperes, comprised of	7	wires, each	No. 20	S.W.G. diameter,	.007	square inches total sectional area
Cargo light cables carrying	4	Amperes, comprised of	7	wires, each	No. 20	S.W.G. diameter,	.007	square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Lead covered wiring used throughout.

Joints in cables, how made, insulated, and protected NO joints anywhere in the wiring: junction boxes used where wires reduced in size, same being made watertight.

Are all the terminals 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 bunks, cargo spaces, or spaces which may at any time be used for carrying cargo, stores, or baggage Yes: None

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 Lead covered wires and cables in wood casings strongly secured to the side deck girders.



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DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible readily accessible

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture None in open alleyways  
where exposed to weather lead covered: where exposed to moisture lead covered in iron pipes.

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

What special protection has been provided for the cables near boiler casings lead covered in iron casings, with shims

What special protection has been provided for the cables in engine room lead covered in iron casings where exposed to damp

How are cables carried through beams lead linings fitted through bulkheads, &c. lead linings (watertight)

How are cables carried through decks through fibre lined iron deck tubes 12" above decks.

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 lead covered in wood casings strongly secured to deck.

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 None

Where are the main switches and fuses for these lights fitted None

If in the spaces, how are they specially protected Not in the spaces.

Are any switches or fuses fitted in bunkers NO.

Cargo light cables, whether portable or permanently fixed Portable How fixed Screw connections.

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

How are the returns from the lamps connected to the hull None

Are all the joints with the hull in accessible positions None

Is the installation supplied with a voltmeter Yes, and with an amperemeter Yes, fixed at Generators.

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 XXXXXX

How are the lamps specially protected in places liable to the accumulation of vapour or gas XXXXXX

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.

Uruga Dock Co. Ltd.

Electrical Engineers

Date 4-10-17.

COMPASSES.

Distance between dynamo or electric motors and standard compass 96 feet

Distance between dynamo or electric motors and steering compass 100 feet.

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>17</u>	<u>22</u>	<u>25</u>	
<u>One</u>	<u>10</u>	<u>8</u>	
<u>1/2</u>	<u>0</u>	<u>0</u>	

Have the compasses been adjusted with and without the electric installation at work at full power Yes, during preliminary trials

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

*Y. K. Kaminura*

Builder's Signature.

Date

GENERAL REMARKS.

The installation of this Vessel has been fitted in accordance with the Rules, the materials and workmanship are good and the Engines have been satisfactorily tried under steam.

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

*J. W. D.* 14/11/17

*J. S. Cairns*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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