

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2390

Port of Yokohama Date of First Survey July 5th Date of Last Survey 19th July No. of Visits 6  
 No. in Reg. Book on the Iron-hulled S. S. "East Indian" Port belonging to Yokohama  
 Built at Uraga By whom Uraga Dock Co. Ltd When built July 1918  
 Owners U. S. Shipping Board. Owners' Address   
 Yard No. 138 Electric Light Installation fitted by Uraga Dock Co. Ltd When fitted July, 1918

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

2 - 10 K.W. Sets, Single cylinder, Inverted Enclosed type steam engines direct coupled to 4 pole D. C. generators.  
 Capacity of Dynamo each 100 Amperes at 100 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed Lower platform Engine Room Whether single or double wire system is used Double  
 Position of Main Switch Board at Dynamos. having switches to groups 5 in Number of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each Forecastle 1 10, Chart Room 1 of 2, Lower Bridge House 2 of 9 each; Shelter deck Pantry 3 of 10 each; Mess Room 2 of 10; Shelter deck Locker 1 of 11; Midship Alley-way 2 of 10 each; E. Room 4 of 10 each; Poop Alleyway 2 of 10 each.  
 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 No 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 Tin Lead Alloy and constructed to fuse at an excess of 85 % per cent over the normal current  
 Are all fuses fitted in easily accessible positions Yes Are the fuses of standard dimensions Main 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  
 Total number of lights provided for 244. arranged in the following groups :-  
 A = 85 lights each of 16 C.P. candle power requiring a total current of 26. Amperes  
 B = 70 lights each of 16 C.P. candle power requiring a total current of 21. Amperes  
 C = 105 lights each of 16 C.P. candle power requiring a total current of 32. Amperes  
 D = 70 lights each of 16 C.P. candle power requiring a total current of 21. Amperes  
 E Wireless lights each of 3 K. W. set candle power requiring a total current of 30. Amperes  
2 Mast head light with 1 lamps each of 32 candle power requiring a total current of 1.3 Amperes  
2 Side light with 1 lamps each of 32 candle power requiring a total current of 1.3 Amperes  
10. Cargo lights of 4x50 C.P. = 200 candle power, whether incandescent or arc lights Incandescent  
 If arc lights, what protection is provided against fire, sparks, &c. No arc lamps used.

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

## DESCRIPTION OF CABLES.

	Carrying	Amperes	comprised of	wires, each	S.W.G. diameter,	square inches total sectional area
Main cable	100		110	20	.1100	
A	26		30	20	.0300	
B	21		30	20	.0300	
C	32		30	20	.0300	
D	21		30	20	.0300	
E	30		30	20	.0300	
Leads to lamps carrying	2		1	18	.0018	
Cargo light cables carrying	4		7	20	.0070	

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Lead covered Armoured where liable to damage: Lead covered in all living rooms.

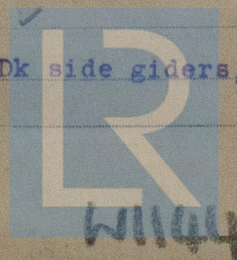
Joints in cables, how made, insulated, and protected No joints, Cast Iron Watertight junction boxes used.

### Connectors

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 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 In holds along side Shelter Dk side girders, In E.R. in iron tubing; In living rooms lead covered;





DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible Yes Accessible.

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture Lead covered where exposed to damp or weather.

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

What special protection has been provided for the cables near boiler casings Kept clear of casing.

What special protection has been provided for the cables in engine room Lead covered in iron tubes where exposed to mechanical injury.

How are cables carried through beams fibre linings, through bulkheads, &c. Sockets; Watertight.

How are cables carried through decks Iron deck tubes, 18" high; fibre lined.

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 Lead covered armoured cable; Strongly secured to Shelter deck.

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage None portables used.

If so, how are the lamp fittings and cable terminals specially protected Cast iron boxes.

Where are the main switches and fuses for these lights fitted In Stokhold.

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 connectors.

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

How are the returns from the lamps connected to the hull XX

Are all the joints with the hull in accessible positions XX

Is the installation supplied with a voltmeter Yes 2. and with an amperemeter Yes, fixed At Dynamo

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.

*J. K. Lammura*

Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass 40 feet to Wireless Motor.

Distance between dynamo or electric motors and steering compass 45 feet.

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
5	10	15	
5	12	20	
1	0	0	

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 N11 degrees on all course in the case of the standard compass and N11 degrees on All course in the case of the steering compass.

*J. K. Lammura*

Builder's Signature.

Date

GENERAL REMARKS.

The installation of this vessel has been fitted in accordance with the Society's 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.

*W. S. A.* 11/9/18.

*Jacob Lammura*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute



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