

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 5204.

Port of Kobe Date of First Survey July 7<sup>th</sup> 1926 Date of Last Survey March 17<sup>th</sup> 1926 No. of Visits 5  
 No. in Reg. Book on the Iron or Steel SEIRYU MARU Port belonging to NISHINOMIYA  
 Built at INNOSHIMA By whom OSAKA IRON WORKS LTD When built 1926-3  
 Owners KITA NIPPON KISEN KAB. KAISHA Owners' Address SAKAYE-MACHI, OHDOMARI KABAUTO  
 Yard No. 1066 Electric Light Installation fitted by OSAKA IRON WORKS LTD When fitted 1926-3

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

6 K.W. Generator direct connected to single vertical engine  
 Capacity of Dynamo 60 Amperes at 100 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed In lower engine room (stair) Whether single or double wire system is used Double  
 Position of Main Switch Board Near Dynamo 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 one in chart room 7 sw one in engine room 5 sw  
one in crew space, 2 sw. one in mess room 3 sw one in pantry, 4 sw.  
 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 Yes and constructed to fuse at an excess of \_\_\_\_\_ 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 108 arranged in the following groups:—

A	8	lights each of	16, 8, + 32	candle power requiring a total current of	3.4	Amperes
B	31	lights each of	16 + 8	candle power requiring a total current of	6.1	Amperes
C	10	lights each of	16	candle power requiring a total current of	2.0	Amperes
D	15	lights each of	16	candle power requiring a total current of	3.0	Amperes
E	24	lights each of	16	candle power requiring a total current of	5.2	Amperes
	2	Mast head light with	2 lamps each of 32	candle power requiring a total current of	.7	Amperes
	2	Side light with	2 lamps each of 32	candle power requiring a total current of	.7	Amperes
	4 (Clusters)	Cargo lights of	4 lamps, each, 16	candle power, whether incandescent or arc lights	Incandescent	

If arc lights, what protection is provided against fire, sparks, &c. None fitted

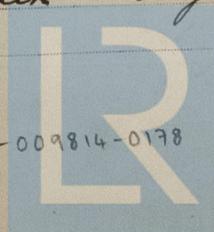
Where are the switches controlling the masthead and side lights placed In chart room.

## DESCRIPTION OF CABLES.

Main cable carrying 18 Amperes, comprised of 7 wires, each 18 B.S.W.G. diameter, .0100 square inches total sectional area  
 Branch cables carrying 6 Amperes, comprised of 1 wires, each 16 B.S.W.G. diameter, .0032 square inches total sectional area  
 Branch cables carrying 6 Amperes, comprised of 2 wires, each 16 B.S.W.G. diameter, .006 square inches total sectional area  
 Leads to lamps carrying 6 Amperes, comprised of 3 wires, each 16 B.S.W.G. diameter, .0100 square inches total sectional area  
 Cargo light cables carrying 12 Amperes, comprised of 7 wires, each 20 B.S.W.G. diameter, .007 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Lead covered + armoured + part in steel tubing  
 Joints in cables, how made, insulated, and protected Porcelain + cast iron junction boxes with N.T. covers  
 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 Clipped to underside of deck + longitudinal + N.T. stuffing boxes in bulkheads.



**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 part in steel tubing where exposed.

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

What special protection has been provided for the cables near boiler casings Led in steel tubing

What special protection has been provided for the cables in engine room Armoured cable laid on wood base.

How are cables carried through beams Holes in beams through bulkheads, &c. W.T. Stuffing boxes

How are cables carried through decks W.T. deck tubes

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 in gas tight tubing

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 Plugged in

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 Sid. Board

**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.

Osaka Iron Works Ltd Electrical Engineers Date \_\_\_\_\_

**COMPASSES.**

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

Distance between dynamo or electric motors and steering compass " 65 "

The nearest cables to the compasses are as follows:—

A cable carrying	<u>4</u>	Amperes	<u>3'-0</u>	feet from standard compass	<u>8-0</u>	feet from steering compass
A cable carrying	<u>10</u>	Amperes	<u>one</u>	feet from standard compass	<u>one</u>	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 Not yet tried

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.

T. Tushimatsu Builder's Signature. Date 10<sup>th</sup> April '26.

**GENERAL REMARKS.** The fitting of the wires throughout this vessel are as stated in this report, and appear to be in accordance with the Rules. Eligible in my opinion to have notation of "ELECTRIC LIGHT" in Register Book when the installation has been tested under full working conditions. Owners state that vessel will arrive in Kobe on or about the 6<sup>th</sup> of May, 1926 when it is intended to test the installation

Sec. Sec: It is submitted that this vessel is eligible for THE RECORD. Elec. Light. W.D. 17/5/26 H.D. Buchanan Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 18 MAY 1926

Elec. Light



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

2m, 11, 20. — Transfer.