

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2382

Port of Yokohama Date of First Survey May 10th, Date of Last Survey 28th May No. of Visits 6  
No. in Reg. Book on the Iron or Steel Kureha Maru Port belonging to Yokohama  
Built at Tsurumi, Japan. By whom Asano Zosen Kaisha When built 1918  
Owners Tatsuma S.S.Co Owners' Address Harayasu Shokai, Tokio. When fitted 1918.  
Yard No. 7 Electric Light Installation fitted by Harayasu Shokai, Tokio.

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two Cylinder Inverted Enclosed High Speed Steam Engine, coupled direct to a 6 pole, Direct Current Generator of 15 K.W. capacity.

Capacity of Dynamo 150 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 Generator having switches to groups 3 in number of lights, &c., as below  
Positions of auxiliary switch boards and numbers of switches on each 2 of 3 in fore-castle, 1 of 3 in Poop, 3 of 8 in

Engine Room, 4 of 6 in Midship Pantry & Saloon passage.

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 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 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 192 arranged in the following groups:—  
A 77 lights each of 32, 20 & 16 candle power requiring a total current of 26.5 Amperes  
B 63 lights each of " " " candle power requiring a total current of 21.4 Amperes  
C 52 lights each of 32 & 16 candle power requiring a total current of 17.5 Amperes  
D Wireless lights each of 3. K.W. Set candle power requiring a total current of 30.0 Amperes  
E 2 Mast head light with 1 lamps each of 32 candle power requiring a total current of 1.5 Amperes  
2 Side light with 1 lamps each of 32 candle power requiring a total current of 1.5 Amperes  
5 Cargo lights of (4X32) 128 C.P. each candle power, whether incandescent or arc lights Incandescent

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

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

## DESCRIPTION OF CABLES.

Description	Amperes	Comprised of	Wires, each	S.W.G. diameter	Square inches total sectional area
Main cable carrying <u>100'</u>		<u>61</u>	<u>17</u>	<u>.1525</u>	<u>.0342</u>
A. Branch <u>26'5</u>		<u>19</u>	<u>18</u>	<u>.0342</u>	<u>.0342</u>
B. Branch cables carrying <u>21'4</u>		<u>19</u>	<u>18</u>	<u>.0342</u>	<u>.0342</u>
C. Branch <u>17'5</u>		<u>19</u>	<u>18</u>	<u>.0342</u>	<u>.0342</u>
D. Branch cables carrying <u>30'</u>		<u>19</u>	<u>18</u>	<u>.0342</u>	<u>.0342</u>
Leads to lamps carrying <u>10</u>		<u>7</u>	<u>20</u>	<u>.0070</u>	<u>.0070</u>
Cargo light cables carrying <u>8</u>		<u>7</u>	<u>20</u>	<u>.0070</u>	<u>.0070</u>

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Lead Covered wire, Armoured used throughout, except in living rooms there lead covered wire used.

Joints in cables, how made, insulated, and protected Brnze Joint Blocks, in Cast Iron Boxes.

connectors. 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 No joints

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 In Holds on top of bottom angles of Deck Side Girders



DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible Accessible.

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

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

What special protection has been provided for the cables near boiler casings Clear of casings; On Bunker casings in Stokehold.

What special protection has been provided for the cables in engine room Lead covered in W.I. Pipes where exposed to damp.

How are cables carried through beams Lead Linings fitted. through bulkheads, &c. Brass W.T. Sockets.

How are cables carried through decks Iron Deck Tubes 12" 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, strongly secured to Deck Side Girders.

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

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, Bunker lamps are Portables from Stokehold.

Are any switches or fuses fitted in bunkers NO

Cargo light cables, whether portable or permanently fixed Portable How fixed Screw Connectors in C.I. Boxes.

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

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

Are all the joints with the hull in accessible positions xxxx

Is the installation supplied with a voltmeter Yes, and with an amperemeter Yes Two, fixed At Generator

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 xxx

Are any switches, fuses, or joints of cables fitted in the pump room or companion xxxx

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.

Harayasu Shokai, Tokio.

Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass From Dynamo 130 feet; Wireless Meters 85 feet.

Distance between dynamo or electric motors and steering compass From Dynamo 140 feet; Wireless Meters 95 feet.

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>10</u>	<u>20</u>	<u>25.</u>	<u>feet from steering compass</u>
<u>5</u>	<u>10</u>	<u>10</u>	<u>feet from steering compass</u>
<u>1/4</u>	<u>0</u>	<u>0</u>	<u>feet from steering compass</u>

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

Shunro Tomiyama

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 Engine has been satisfactorily tried under steam.

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

JWD  
26/7/18

James Cairns  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 26 JUL. 1918

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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