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# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2606

Port of Kobe Date of First Survey June 2<sup>nd</sup> Date of Last Survey June 26<sup>th</sup> No. of Visits 4  
 on the Iron or Steel Single Screw Steamer Yayo Maru Port belonging to Toba  
 Book Built at O Narima By whom The Narima Dockyard Coy. When built 1919  
 Owners Teikoku Steamship Company. Owners' Address  
 No. 10 Electric Light Installation fitted by The Narima Dockyard Comp. When fitted 1919

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

One direct current open type compound dynamo directly coupled with special high speed double engine.  
 Capacity of Dynamo 13 KW. 118 Amperes at 110 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed Engine room bottom platform Whether single or double wire system is used double  
 Position of Main Switch Board Along side 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 No auxiliary board, 5 switches on main panel viz. Signal & Saloon, Engineers & Crew, Engine & Boiler rooms, Cargo lights & Wireless.  
 Are fuses 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  
 Is vessel 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 100 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 206 arranged in the following groups:—

<u>159</u> lights each of	<u>16</u> candle power requiring a total current of	<u>28.9</u> Amperes
<u>40</u> lights each of	<u>16</u> candle power requiring a total current of	<u>20.34</u> Amperes
<u>5</u> lights each of	<u>32</u> candle power requiring a total current of	<u>5.08</u> Amperes
<u>2</u> lights each of	<u>1000</u> candle power requiring a total current of	<u>9.1</u> Amperes
	lights each of	Amperes
Mast head light with	lamps each of	Amperes
Side light with	lamps each of	Amperes
Cargo lights of	<u>16 x 1000</u> candle power, whether incandescent or arc lights	

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

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

## DESCRIPTION OF CABLES.

Main cable carrying	<u>101.42</u> Amperes, comprised of	<u>37</u> wires, each	<u>16</u> S.W.G. diameter,	<u>.117</u> square inches total sectional area
Branch cables carrying	<u>17.65</u> Amperes, comprised of	<u>11</u> wires, each	<u>20</u> S.W.G. diameter,	<u>.011</u> square inches total sectional area
Branch cables carrying	<u>9.82</u> Amperes, comprised of	<u>7</u> wires, each	<u>16</u> S.W.G. diameter,	<u>.0226</u> square inches total sectional area
do lamps carrying	<u>6.55</u> Amperes, comprised of	<u>7</u> wires, each	<u>16</u> S.W.G. diameter,	<u>.0226</u> square inches total sectional area
Cargo light cables carrying	<u>29.4</u> Amperes, comprised of	<u>7</u> wires, each	<u>16</u> S.W.G. diameter,	<u>.0226</u> square inches total sectional area
Wireless	<u>38.0</u>	<u>11</u>	<u>16</u>	<u>.0354</u>

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Insulated wires armoured in holds & bunkers  
wires in Engine & Boiler rooms enclosed in steel tubes.

How are the joints in cables, how made, insulated, and protected  
Joints soldered & wound with insulating tape protected by boots.

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances  
 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

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 wire



**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 wires are used.

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

What special protection has been provided for the cables near boiler casings Knives through slit tube

What special protection has been provided for the cables in engine room do — do —

How are cables carried through beams through bulkheads, &c. gland.

How are cables carried through decks

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 by armoured wires in wood casing.

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

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

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  and with an amperemeter  fixed

**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 \_\_\_\_\_ 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.

Skauge Electrical Engineers Date \_\_\_\_\_

**COMPASSES.**

Distance between dynamo or electric motors and standard compass about 116 feet.

Distance between dynamo or electric motors and steering compass about 176 feet.

The nearest cables to the compasses are as follows:—

A cable carrying	<u>17.65</u> Amperes	<u>about 26</u> feet from standard compass	<u>about 256</u> feet from steering compass
A cable carrying	<u>9.82</u> Amperes	<u>24</u> feet from standard compass	<u>248</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

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.

Builder's Signature. Date \_\_\_\_\_

**GENERAL REMARKS.**

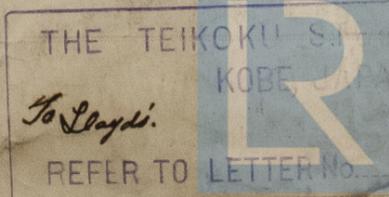
The installation has been fitted according to the requirements of the Rules and worked satisfactorily on trial

It is submitted that this vessel is eligible for

**THE RECORD ELEC. Light** 18/11/19.

R. S. Satchell  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute



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