

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2639.

*Osaka* Date of First Survey *7-Aug.* Date of Last Survey *22<sup>nd</sup> Sept. 19* No. of Visits *7*  
 on the Iron or Steel *S.S. Yesaki Maru* Port belonging to *Kobe*  
 Built at *Innoshima Bingo* By whom *O J wks Bingo Yord* When built *1919*  
*Tokusai-Kisen-Kabushiki-Kaisha* Owners' Address *8, Kaigan-dori Kobe Japan*  
*916* Electric Light Installation fitted by *O J wks Bingo Yord.* When fitted *1919*

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

*Direct current compound dynamo*

Capacity of Dynamo *10 KW 100 Amperes at 100* Volts, whether continuous or alternating current *D. C.*

Is Dynamo fixed *on starboard side E. R. platform* Whether single or double wire system is used *double wire*

Position of Main Switch Board *on starboard E. R.* having switches to groups *for main circuit* of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each

*1. for engine room, 1. for crews quarter, 8 for saloon & officer's  
 Ye room, 5 for flying bridge etc.*

fuses are fitted on main switch board to the cables of main circuit *fitted* and on each auxiliary switch board to the cables of auxiliary

circuits *fitted* and at each position where a cable is branched or reduced in size *branched or reduced* and to each lamp circuit *branches*

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 *25* 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 *115 & 2 arc lamps* arranged in the following groups:—

A Eng. room 28 lights each of	16	candle power requiring a total current of	8.4	Amperes
B Wireless telegraphy lights each of		candle power requiring a total current of	35.0	Amperes
C Forecastle room 27 lights each of	16	candle power requiring a total current of	8.1	Amperes
D after " " 18 lights each of	16	candle power requiring a total current of	5.4	Amperes
E bridge deck 14 lights each of	16	candle power requiring a total current of	4.2	Amperes
2 Mast head light with 2 lamps each of	32	candle power requiring a total current of	2.0	Amperes
2 Side light with 2 lamps each of	32	candle power requiring a total current of	2.0	Amperes
6 Cargo lights of 4 clustered	16	candle power, whether incandescent or arc lights	both used	

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

*2 arc lamps are used and the protection is double glass globes*

Where are the switches controlling the masthead and side lights placed *at the chart room*

## DESCRIPTION OF CABLES.

Main cable carrying *100* Amperes, comprised of *lead* wires, each *19/#14* S.W.G. diameter, *97600* square inches total sectional area

Branch cables carrying *30* Amperes, comprised of *"* wires, each *7/#16* S.W.G. diameter, *22900* square inches total sectional area

Branch cables carrying *15* Amperes, comprised of *"* wires, each *"* S.W.G. diameter, *"* square inches total sectional area

Leads to lamps carrying *0.8* Amperes, comprised of *"* wires, each *1/#18* S.W.G. diameter, *2304* square inches total sectional area

Cargo light cables carrying *15* Amperes, comprised of *armoured* wires, each *7/#16* S.W.G. diameter, *22900* square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

*Officers room & crew's quarter lead covered wires*

*Eng. & boiler space and each holds armoured wire or through  
 galvanized iron pipes.*

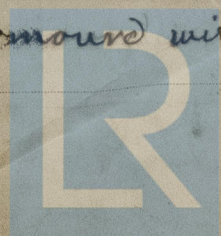
Joints in cables, how made, insulated, and protected *porcelain box or iron box are used*

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

How are the cables led through the ship, and how protected *By the application of armoured wire & the protection of galvanized iron pipes*





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 By the protection of galvanized iron pipes

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

What special protection has been provided for the cables near boiler casings " "

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

How are cables carried through beams through the lead pipes through bulkheads, &c. Through the galvanized iron pipes

How are cables carried through decks Through the galvanized iron pipes & the flanges

Are any cables run through coal bunkers yes or cargo spaces yes or spaces which may be used for carrying cargo, stores, or baggage no

If so, how are they protected Through the galvanized iron pipes

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 /

Cargo light cables, whether portable or permanently fixed portable How fixed by the plugs

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 yes

Is the installation supplied with a voltmeter yes, and with an amperemeter yes, fixed on the switch 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 500 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.

S. Hanna.

Electrical Engineers

Date 20<sup>th</sup> 11. '19

COMPASSES.

Distance between dynamo or electric motors and standard compass /

Distance between dynamo or electric motors and steering compass /

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
A cable carrying	Amperes	feet from standard compass	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.

Kahachi



Builder's Signature.

Date

GENERAL REMARKS.

This installation has been fitted in accordance with the requirements of the Rules and worked satisfactory on trial.

It is submitted that this vessel is eligible for THE RECORD

ELEC: LIGHT 8/8/20

John Sim  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI 12 MAR 1920



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN