

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1852

Port of Kobe Date of First Survey 1<sup>st</sup> June Date of Last Survey 18 July No. of Visits 10  
 No. in on the Reg. Book S.S. "Katsunura Maru" Port belonging to Tokio  
 Built at Kobe By whom The Mitsu Bishi D. & E. Wks When built 1916-7  
 Owners The Mitsu Bishi Goshi Kaisha Owners' Address Tokio  
 Yard No. 63 Electric Light Installation fitted by The Mitsu Bishi D. & E. Wks When fitted 1916

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Dynamo:—Capacity 70 A.M.; Field winding—Compound; R.p.m.—550, Direct Couple  
 Dynamo Engine:—  
 Capacity of Dynamo 70 Amperes at 100 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed in Engine room starboard Whether single or double wire system is used Double wire  
 Position of Main Switch Board Engine room having switches to groups 7 of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each One submain board fixed at starboard alleyway of amidship & engine room; Bridge & one switch of each.  
 If cut outs 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 cessel is wired on the double wire system are cut outs fitted to both flow and return wires or cables of all circuits including lamp circuits yes  
 Are the cut outs of non-oxidizable metal yes and constructed to fuse at an excess of 10 per cent over the normal current  
 Are all cut outs 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 cut-outs constructed of incombustible materials and fitted on incombustible bases yes.  
 Total number of lights provided for 89 arranged in the following groups:—  
 A Forecastle 11 lights each of 24 candle power requiring a total current of 8.5 Amperes  
 B Under poop 12 lights each of 16 candle power requiring a total current of 9.1 Amperes  
 C Engine room 22 lights each of 16 candle power requiring a total current of 13.9 Amperes  
 D Bridge 18 lights each of 32 candle power requiring a total current of 14.0 Amperes  
 E Amid ship 25 lights each of 32 candle power requiring a total current of 16.3 Amperes  
2 Mast head light with 2 lamps each of double filament 32 candle power requiring a total current of 2.25 Amperes  
2 Side light with 2 lamps each of double filament 32 candle power requiring a total current of 2.25 Amperes  
3 Cargo lights of each 4 32 candle power, whether incandescent or arc lights incandescent  
 If arc lights, what protection is provided against fire, sparks, &c. no arc light

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

## DESCRIPTION OF CABLES.

Main cable carrying 30.3 Amperes, comprised of twelve wires, each 7/16 L.S.G. diameter, 0.022 square inches total sectional area  
 Branch cables carrying 14 Amperes, comprised of twelve wires, each 7/18 L.S.G. diameter, 0.0125 square inches total sectional area  
 Branch cables carrying Amperes, comprised of wires, each L.S.G. diameter, square inches total sectional area  
 Leads to lamps carrying 0.56 Amperes, comprised of single wires, each 18 L.S.G. diameter, 0.0018 square inches total sectional area  
 Cargo light cables carrying 4.48 Amperes, comprised of twelve wires, each 13/32 L.S.G. diameter, 0.0034 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

All cables insulated with Vulcanized rubber & protected with lead covering or Galvanized steel wire covering

Joints in cables, how made, insulated, and protected

All joint in cables made, insulate & protected in porcelain or iron junction box.

Are all the joints of cables thoroughly soldered, resin only having been used as a flux soldered 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, all accessible position

Are there any joints in or branches from the cable leading from dynamo to main switch board no branches or joint

How are the cables led through the ship, and how protected All cables protected with lead or steel wire armoring & supported on beams, bulkheads with screw clip.



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 *steel armored cable provided for this purpose*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *armored with galvanized steel wire*

What special protection has been provided for the cables near boiler casings *galvanized steel wire armored.*

What special protection has been provided for the cables in engine room *with galvanized steel wire armored*

How are cables carried through beams *with hard wood bushing* through bulkheads, &c. *sheet lead*

How are cables carried through decks *with galvanized iron deck tubes*

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

If so, how are they protected *they strongly secured to the under side of decks or to bulkheads by screw clip*

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 cut outs for these lights fitted */*

If in the spaces, how are they specially protected */*

Are any switches or cut outs 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 */*

The installation is *max 100 V* supplied with a voltmeter and *max 100 Amp* amperemeter, fixed *on the main switch board.*

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and cut-outs fitted in positions not liable to the accumulation of petroleum vapour or gas

Are any switches, cut outs, 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 *98* per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than *600* megohms per statute mile after 24 hours' immersion in seawater.

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.

*N. Iso.*

Electrical Engineers

Date *July 20<sup>th</sup> 1916*

COMPASSES.

Distance between dynamo or electric motors and standard compass *56 feet.*

Distance between dynamo or electric motors and steering compass *72 feet.*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>14</i>	<i>Amperes</i>	<i>10</i>	<i>110</i>
<i>9.1</i>	<i>Amperes</i>	<i>110</i>	<i>15</i>
<i>/</i>	<i>Amperes</i>	<i>/</i>	<i>/</i>

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 *0* degrees on */* course in the case of the standard compass and *0* degrees on */* course in the case of the steering compass.

MITSUBISHI DOCKYARD & ENGINE WORKS, KOBÉ.

*Y. Sugitani.*

Builder's Signature.

Date

GENERAL REMARKS.

*The installation has been fitted in accordance with the requirements of the Rules & worked satisfactorily on trial. It is submitted that this vessel is eligible for THE RECORD. Elec. light.*

*JWR* *27/11/16* *A. L. Jones*

Surveyor to Lloyd's Register of British and Foreign Shipping

Committee's Minute



Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.