

FRI. 4-JAN. 1917

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No.

Port of Kobe Date of First Survey 16 Aug. Date of Last Survey 10 Sept. No. of Visits 6  
 No. in on the Iron or Steel Single Ser. S. "Meichi Maru" Port belonging to Tokumi  
 Reg. Book Built at Inuoshima By whom The Osaka Iron Works Ltd When built 1917  
 Owners M. Meiji Kaisha R. Kaisha Owners' Address The Osaka Iron Works Ltd When fitted 1917  
 Card No. 927 Electric Light Installation fitted by The Osaka Iron Works Ltd

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

D.C. Compound dynamo.

Capacity of Dynamo 10 Kw. 100 Amperes at 100 amp. Volts, whether continuous or alternating current Continuous  
at starboard side on platform of F.R. double wire system

Where is Dynamo fixed Engine room Whether single or double wire system is used Double

Position of Main Switch Board Engine room having switches to groups for main circuit breaker of lights, &c., as below  
and 1 branch wire

Positions of auxiliary switch boards and numbers of switches on each One for engine room One for crew's quarters two for officer's  
room and one for single light

If 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 reduced and to each lamp circuit branched

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 fitted

Are the fuses of non-oxidizable metal yes and constructed to fuse at an excess of 50% 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 122 and 2 arc lamp arranged in the following groups:—

A	Engine room 26 lights each of	16	candle power requiring a total current of	16	Amperes
B	Officer's room 38 lights each of	16 and 10	candle power requiring a total current of	19	Amperes
C	Crew's quarters 11 lights each of	16	candle power requiring a total current of	6	Amperes
D	Wireless telegraphy lights each of	—	candle power requiring a total current of	18	Amperes
E	Store lights lights each of	32	candle power requiring a total current of	106	Amperes
	Mast head light with 5 lamps each of	32	candle power requiring a total current of	2.12	Amperes
	Side light with 2 lamps each of	32	candle power requiring a total current of	2.12	Amperes
	Cargo lights of	10 x 4 distorted 16	candle power, whether incandescent or arc lights	both are used	

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

2 arc lamps used + protection in made complete they requiring a total current of 2.12 + 6 amperes

Where are the switches controlling the masthead and side lights placed at bridge deck

## DESCRIPTION OF CABLES.

Main cable carrying 100 Amperes, comprised of lead wires, each #0 S.W.G. diameter, 0.17 square inches total sectional area  
 Branch cables carrying 16 Amperes, comprised of ditto wires, each 7/16" S.W.G. diameter, 0.024 square inches total sectional area  
 Branch cables carrying 19 Amperes, comprised of lead ditto wires, each 7/16" S.W.G. diameter, 0.024 square inches total sectional area  
 Leads to lamps carrying 43 Amperes, comprised of covered wires, each 1/16" S.W.G. diameter, 0.003 square inches total sectional area  
 Cargo light cables carrying 27.2 Amperes, comprised of ditto wires, each 7/20" S.W.G. diameter, 0.015 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Officer's room and crew's quarters lead cover wire through wooden cover

Engine and boiler space and cargo hatches armoured wire or through galvanized w.i. pipe

Joints in cables, how made, insulated, and protected

porcelain box or cast 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 no

How are the cables led through the ship, and how protected no



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**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 galvanizing wire pipe

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

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

What special protection has been provided for the cables in engine room by the use of armoured wire or galvanizing wire pipe or covers

How are cables carried through beams lead sheet is covered through bulkheads, &c. by gland nut with india rubber packing complete

How are cables carried through decks through a galvanizing wire pipe with flange with fixed to deck

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 by the use of armoured wire or wire through galvanizing wire pipes

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage nothing

If so, how are the lamp fittings and cable terminals specially protected no

Where are the main switches and fuses for these lights fitted no

If in the spaces, how are they specially protected no

Are any switches or fuses fitted in bunkers no

Cargo light cables, whether portable or permanently fixed portable How fixed no

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel no

How are the returns from the lamps connected to the hull no

Are all the joints with the hull in accessible positions no

Is the installation supplied with a voltmeter yes, and with an amperemeter yes, fixed at 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 — 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.

E. Toyoda Electrical Engineers Date —

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 90-0

Distance between dynamo or electric motors and steering compass —

The nearest cables to the compasses are as follows:—

A cable carrying <u>100</u> Amperes	<u>71-0</u> feet from standard compass	<u>—</u> feet from steering compass
A cable carrying <u>—</u> Amperes	<u>—</u> feet from standard compass	<u>—</u> feet from steering compass
A cable carrying <u>—</u> Amperes	<u>—</u> feet from standard compass	<u>—</u> 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.

G. Yumada Builder's Signature. Date —

**GENERAL REMARKS.**

This installation has been fitted in accordance with the Rule requirements & worked satisfactorily on trial.

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

J.W.D. 4/1/18

Arthur Jones  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 8-JAN. 1918

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.