

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2247.

Port of Kobe Date of First Survey March 11<sup>th</sup> Date of Last Survey March 20<sup>th</sup> No. of Visits Three  
 No. in Reg. Book on the Iron on Steel S.S. Meiko Maru Port belonging to Takumi  
 Built at Innosshima By whom Osaka Iron Works When built 1918  
 Owners Meiji Kaisha Kabushiki Kaisha Owners' Address ✓  
 Yard No. 947 Electric Light Installation fitted by The Osaka Iron Works When fitted 1918

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Direct compound dynamo.

Capacity of Dynamo 10 K.W. 100 Amperes at 100 Volts, whether continuous or alternating current D.C.Where is Dynamo fixed at starboard side on platform of E.R. Whether single or double wire system is used double wire systemPosition of Main Switch Board on the bulkhead of starboard coal bunkers having switches to groups for main circuit breakers of lights, &c., as below and for branch and wireless circuit.

Positions of auxiliary switch boards and numbers of switches on each

one for engine room, one for crew's quarters, two for officers' room and one for signal light, one for wireless circuit.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 and reduced and to each lamp circuit branchedIf 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 fittedAre the fuses of non-oxidisable metal yes and constructed to fuse at an excess of 50% per cent over the normal currentAre 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 yesAre all switches and fuses constructed of incombustible materials and fitted on incombustible bases yesTotal number of lights provided for 137 and arc lamps arranged in the following groups:—

A	Engine room 26 lights each of	16	candle power requiring a total current of	16	Amperes
B	officers' room 4 lights each of	16	candle power requiring a total current of	23.3	Amperes
C	Crew's quarters 8 lights each of	16	candle power requiring a total current of	4.2	Amperes
D	Wireless telegraph lights each of	—	candle power requiring a total current of	1.8	Amperes
E	stern lights 1 lights each of	32	candle power requiring a total current of	1.06	Amperes
	Mast head light with 3 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 12-1/2 clustered 16 candle power, whether incandescent or arc lights both are used

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

arc lamps used, protection is made complete they requiring a total current of 26.4 + 8 amperes.Where are the switches controlling the masthead and side lights placed placed at bridge deck

## DESCRIPTION OF CABLES.

No. Cables.

Main cable carrying 100 Amperes, comprised of lead wires, each #59/18 S.W.G. diameter, 0.09 square inches total sectional area  
 Branch cables carrying 16 Amperes, comprised of ditto wires, each #7/16 S.W.G. diameter, 0.022 square inches total sectional area  
 Branch cables carrying 32.3 Amperes, comprised of annoyed wires, each #7/16 S.W.G. diameter, 0.022 square inches total sectional area  
 Leads to lamps carrying 43 Amperes, comprised of lead wires, each #1/8 S.W.G. diameter, 0.005 square inches total sectional area  
 Cargo light cables carrying 33.6 Amperes, comprised of ditto wires, each #1/8 S.W.G. diameter, 0.005 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

officers' room, and crew's quarters lead comes wire through wooden covers  
engine and boiler space and cargo hatchways armoured wire through galvanised wire pipe

Joints in cables, how made, insulated, and protected

porcelain box or cast resin box are usedAre 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 yesAre there any joints in or branches from the cable leading from dynamo to main switch board noHow 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 galvanised iron pipes*

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

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 galvanised iron pipes*

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 galvanised iron pipe with flange 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 wires through galvanised iron 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 *✓*

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 *✓*

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 *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. Toyoshima* Electrical Engineers

Date \_\_\_\_\_

COMPASSES.

Distance between dynamo or electric motors and standard compass

*Above 90°*

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
<i>1.3</i>		<i>76</i>	

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 in accordance with the requirements of the Rules and worked satisfactorily on trial*

*It is submitted that this vessel is eligible for THE RECORD. ELEC. LIGHT.*

*R. B. Batcher*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. AUG. 16. 1913*