

MON. FEB. 1917

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## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2160

Port of Kobe Date of First Survey 23<sup>rd</sup> Sep Date of Last Survey 5<sup>th</sup> Nov. 1917 No. of Visits 6  
 No. in Reg. Book on the Iron or Steel See Strs "Yamato Maru" Port belonging to Amagasaki  
 Built at Innosshima By whom The Osaka Iron Works Ltd When built 1917  
 Owners Kabushiki Kaisha Goko Shokai Owners' Address Kobe  
 Yard No. 914 Electric Light Installation fitted by The Osaka Iron Works Ltd When fitted 1917

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

D.C. compound dynamo  
High speed non-condensing single vertical engine  
 Capacity of Dynamo 10 Kw 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 system  
 Position of Main Switch Board at the dynamo having switches to groups for main circuit, branch lights, &c., as below  
 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, one for signal 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 and reduced and to each lamp circuit branched and reduced

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 20% 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 1st and 2nd arranged in the following groups:—

<u>Engine room</u> 2 lights each of <u>16 CP and 10 CP</u> candle power requiring a total current of <u>1.2</u> Amperes
<u>Officers' room</u> 2 lights each of <u>16 CP and 10 CP</u> candle power requiring a total current of <u>2.5</u> Amperes
<u>Crew's quarters</u> 11 lights each of <u>16 CP</u> candle power requiring a total current of <u>5.6</u> Amperes
<u>Wireless telegraphy</u> lights each of <u>—</u> candle power requiring a total current of <u>1.59</u> Amperes
<u>Stair light and chart</u> 2 lights each of <u>32 CP and 16 CP</u> candle power requiring a total current of <u>2.12</u> Amperes
<u>Mast head light</u> with <u>2</u> lamps each of <u>32</u> candle power requiring a total current of <u>2.12</u> Amperes
<u>Side light</u> with <u>2</u> lamps each of <u>32</u> candle power requiring a total current of <u>2.12</u> Amperes
<u>Cargo lights</u> of <u>12-4 clustered 16</u> candle power, whether incandescent or arc lights

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

are lamps used and protection in complete they requiring a total of 28.5 + 8 amperes.

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

## DESCRIPTION OF CABLES.

in cable carrying 100 Amperes, comprised of lead wires, each #18/60 S.W.G. diameter, .15 square inches total sectional area  
 in cables carrying 12 Amperes, comprised of ditto wires, each #16/7 S.W.G. diameter, .024 square inches total sectional area  
 in cables carrying 25 Amperes, comprised of armoured or lead wires, each #16/7 S.W.G. diameter, .024 square inches total sectional area  
 for lamps carrying 4.2 Amperes, comprised of covered wires, each #18/11 S.W.G. diameter, .003 square inches total sectional area  
 for light cables carrying 25 Amperes, comprised of ditto wires, each #18/11 S.W.G. diameter, .024 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Officers' room and crew's quarters lead cover wire through wooden cover  
engine and boiler space and cargo hatches armoured wire or through galvanized wire pipe

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

Where any joints in or branches from the cable leading from dynamo to main switch board no

Shipping 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 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 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 pipes as 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 flanges, which 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 wired 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 main 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, tested by tipping 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. T. Yoshida Electrical Engineers Date —

**COMPASSES.**

Distance between dynamo or electric motors and standard compass about 90 ft.

Distance between dynamo or electric motors and steering compass —

The nearest cables to the compasses are as follows:—

A cable carrying <u>53</u> Amperes	<u>7 ft.</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.

Osaka Iron Works Builder's Signature. Date —

**GENERAL REMARKS.**

MANAGING DIRECTOR

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.

TUE. 19 FEB. 1918

A. L. Jones  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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