

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2359

Port of Kobe Date of First Survey 20 Aug Date of Last Survey 25 Sept No. of Visits 8  
No. in on the Iron or Steel Twin Screw St. Indes Maru Port belonging to Osaka  
Reg. Book Built at Osaka By whom The Osaka Iron Works, Ltd. When built 1918  
Owners The Osaka Shosen Kaisha Owners' Address Osaka  
Yard No. 880 Electric Light Installation fitted by The Osaka Iron Works, Ltd. When fitted 1918

### DESCRIPTION OF DYNAMO, ENGINE, ETC.

Single Cylinder Vertical Enclosed Self Lubricating Engine  
Direct current compound wound dynamo  
Capacity of Dynamo 20 K.W. 200 Amperes at 100 Volts, whether continuous or alternating current Continuous  
Where is Dynamo fixed In Engine Room  
Position of Main Switch Board at the dynamo having switches to groups A, B, C, D, E, F of lights, &c., as below  
Positions of auxiliary switch boards and numbers of switches on each 1 for Eng. Rm.: 1 for Main Room  
2 for after Cabin passage; 1 for pantry; 1 for lower bridge passage;  
1 for chart room: 1 for pantry.  
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 vessel 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 30 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 259 + 2 are lamps arranged in the following groups :-

A	Eng. Rm. 54	lights each of	16	candle power requiring a total current of	28.62	Amperes	
B	Mail Rm. 41	lights each of	16	candle power requiring a total current of	21.73	Amperes	
C	Aft. cabins 38	lights each of	16	candle power requiring a total current of	20.14	Amperes	
D	Pantry 35	lights each of	16	candle power requiring a total current of	19.60	Amperes	
E	Lower Berthing 20	lights each of	16	candle power requiring a total current of	10.60	Amperes	
F	Chart Rm. 15	lights each of	32 + 16	candle power requiring a total current of	12.72	*	
	Mast head light with	2	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
	14-4 Clustered Cargo lights of		50	candle power, whether incandescent or arc lights	Incandescent		

If arc lights, what protection is provided against fire, sparks, &c. 2 arc lamps protected by double globe with iron bar guards, requiring a total of 25.5 + 8 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	80	wires, each	18	L.S.G. diameter,	14469 ✓	square inches total sectional area
	28.62	"	30	"	18	"	05426 ✓	"
Branch cables carrying	21.73	Amperes, comprised of	28	wires, each	18	L.S.G. diameter,	04522 ✓	square inches total sectional area
	20.14	"	19	"	18	"	03438 ✓	"
Branch cables carrying	19.60	Amperes, comprised of	19	wires, each	18	L.S.G. diameter,	03438 ✓	square inches total sectional area
	18.60	"	18	"	18	"	03557 ✓	"
Leads to lamps carrying	0.53	Amperes, comprised of	1	wires, each	18	L.S.G. diameter,	00181 ✓	square inches total sectional area
	12.72	"	13	"	18	"	02337 ✓	"
Cargo tight cables carrying	33.7	Amperes, comprised of	35	wires, each	18	L.S.G. diameter,	08309 ✓	square inches total sectional area
	2.12	"	7	"	18	"	01266 ✓	"

### DESCRIPTION OF INSULATION, PROTECTION, ETC.

Officers' Rooms & Crew's quarters, lead covered wire in wooden cases  
 Engine & boiler spaces & cargo spaces, armoured wire, or carried  
 through galvanized iron pipes.  
 Joints in cables, how made, insulated, and protected. Porcelain or cast iron boxes

Are all the joints of cables thoroughly soldered, resin only having been used as a flux 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 As above.



DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *No.*

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *Galvanized M.I. pipes*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Armoured wire.*

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

What special protection has been provided for the cables in engine room *Armoured wire or galvanized w.i. pipes*

How are cables carried through beams *Sheet lead protection* through bulkheads, &c. *By gland nut with india rubber packing complete.*

How are cables carried through decks *Through galvanized w.i. pipes with flanges 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 *yes*

If so, how are they protected *By the use of armoured wire or wires through gal. w.i. 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 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 *✓*

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 installation is supplied with a voltmeter and an amperemeter, fixed

The copper used is guaranteed to have a conductivity of per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 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.

*Y. Hirula* Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass *Above 100' 0"*

Distance between dynamo or electric motors and steering compass *" 90' 0"*

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.

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.**

*Arthur L. Jones*

Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

FRI. 7 FEB. 1919



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