

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2383

Port of Kobe Date of First Survey 23 Nov Date of Last Survey 26 Dec 1918 No. of Visits 7
 No. in Reg. Book on the Iron Steel S.S. "Taiko Maru" Port belonging to Osaka
 Built at Osaka By whom The Osaka Iron Works When built 1918
 Owners The Uchida K. Kaisha Owners' Address Kobe
 Yard No. 950 Electric Light Installation fitted by The Osaka Iron Works When fitted 1918

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Compound wound, 6 poles Open type dynamo.
Single cyl., Vertical, Non-condensing, self lubricating enclosed engine
 Capacity of Dynamo 15 k.w. 150 Amperes at 100 Volts, whether continuous or alternating current Continuous.
 Is Dynamo fixed at start's side on Engine room platform
 Location of Main Switch Board Engine room having switches to groups for main circuit breaker, main switch, wireless of lights, &c., as below circuit + 6 branches of wire
 Numbers of auxiliary switch boards and numbers of switches on each One for Engine room, One for Mess room, One for pantry, One for Seamen's quarter, and One for Chart room.

Cut outs 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
 Is wiring on the double wire system are cut outs fitted to both flow and return wires or cables of all circuits including lamp circuits Fitted
 Are cut outs of non-oxidizable metal yes and constructed to fuse at an excess of 30 per cent over the normal current
 Are 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 switches and cut-outs constructed of incombustible materials and fitted on incombustible bases yes

Number of lights provided for 139 + 2 arc lamps arranged in the following groups:—

Machinery space	30 lights each of	16	candle power requiring a total current of	16.90	Amperes
1st bridge	22 lights each of	16	candle power requiring a total current of	11.66	Amperes
2nd bridge	20 lights each of	16	candle power requiring a total current of	10.60	Amperes
3rd bridge	9 lights each of	16	candle power requiring a total current of	4.77	Amperes
Fore space	11 lights each of	16	candle power requiring a total current of	5.83	Amperes
Navigation light	11	16 + 32	candle power requiring a total current of	8.48	Amperes
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

Cargo lights of 7-8 clustered 16 candle power, whether incandescent or arc lights Incandescent
 lights, what protection is provided against fire, sparks, &c. 2 arc lamps used and protected by double lenses and iron guard. and they required a total of 25.5 + 8 amperes.
 Are the switches controlling the masthead and side lights placed at bridge deck.

SECTION OF CABLES.

Cable carrying	150 Amperes, comprised of	Lead wires, each	$30/18^{\text{th}}$	L.S.G. diameter,	0.14469	square inches total sectional area
	16.90	Armoured + lead	$15/18^{\text{th}}$		0.027129	
Cables carrying	11.66 Amperes, comprised of	" wires, each	$13/18^{\text{th}}$	L.S.G. diameter,	0.023312	square inches total sectional area
	10.60	"	$7/18^{\text{th}}$		0.012660	
Cables carrying	4.77 Amperes, comprised of	" wires, each	$7/18^{\text{th}}$	L.S.G. diameter,	0.019895	square inches total sectional area
	5.83	"	$11/8^{\text{th}}$		0.018096	
10 lamps carrying	8.48 Amperes, comprised of	covered wires, each	$11/8^{\text{th}}$	L.S.G. diameter,	0.018096	square inches total sectional area
	0.63	"	$15/18^{\text{th}}$		0.027129	
Light cables carrying	15.13 Amperes, comprised of	Armoured wires, each	$15/18^{\text{th}}$	L.S.G. diameter,	0.027129	square inches total sectional area

SECTION OF INSULATION, PROTECTION, ETC.

Wires' rooms and Crews' quarters Lead covered wire through
open covers, Engine + Boiler spaces and Cargo hatches Armoured
or wired through galvanized wrought iron pipes.
 In cables, how made, insulated, and protected Porcelain box or Cast iron box are used.

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 no.



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DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *By galvanized wrought 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 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 galv. W.I. pipes as covers.*

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

How are cables carried through decks *Through galv. 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 *no*

If so, how are they protected *By the use of Armoured wire or wired through galv. W.I. 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 cut outs for these lights fitted *no.*

If in the spaces, how are they specially protected *no.*

Are any switches or cut outs 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.*

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 *yes.*

Are any switches, cut outs, or joints of cables fitted in the pump room or companion *no.*

How are the lamps specially protected in places liable to the accumulation of vapour or gas *By the use of deck ceiling lamps.*

The installation is *yes* supplied with a voltmeter and *yes* an amperemeter, fixed *at switch board.*

The copper used is guaranteed to have a conductivity of *99* 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.

Y. Hinton Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass *about 120 ft.*

Distance between dynamo or electric motors and steering compass *" 150 ft.*

The nearest cables to the compasses are as follows:—

A cable carrying *2.12* Amperes *about 23* feet from standard compass feet from steering compass

A cable carrying *0.53* Amperes *" 8* feet from standard compass feet from steering compass

A cable carrying *4.77* Amperes *" 7* 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.

This 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
7/3/19

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

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.