

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2616

Port of Kobe Date of First Survey _____ Date of Last Survey _____ No. of Visits _____
 No. in Reg. Book on the ~~Iron~~ Steel Single Screw Steamer "Yuri Maru" Port belonging to _____
 Built at O'Harima By whom Harima Dockyard Company When built 1919.
 Owners _____ Owners' Address _____
 Yard No. 29 Electric Light Installation fitted by Harima Dockyard Company When fitted 1919.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One direct current open type compound dynamo directly coupled with special high speed single engine.

Capacity of Dynamo 15 KW 136 Amperes at 110 Volts, whether continuous or alternating current Continuous.

Where is Dynamo fixed Engine room, bottom platform Whether single or double wire system is used double.

Position of Main Switch Board alongside dynamo having switches to groups ABC DE + F of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Six switches on dynamo panel viz.

Engine + Boiler rooms, Cargo lamps, Engineers + Crew Spaces, Saloon and Stores, + Signal lamp and Wireless room.

If fuses 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 fuses fitted to both flow and return wires or cables of all circuits including lamp circuits ✓

Are the fuses of non-oxidisable metal Yes and constructed to fuse at an excess of 100 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

Total number of lights provided for 186 arranged in the following groups:—

A	147	lights each of	16	candle power requiring a total current of	26.7	Amperes
B	32	lights each of	32	candle power requiring a total current of	11.62	Amperes
C	5	lights each of	32	candle power requiring a total current of	5.1	Amperes
D	2	lights each of	1000	candle power requiring a total current of	9.1	Amperes
E		lights each of		candle power requiring a total current of		Amperes
Must head light with _____ lamps each of _____ candle power requiring a total current of _____ Amperes						
Side light with _____ lamps each of _____ candle power requiring a total current of _____ Amperes						
Cargo lights of <u>32 + 1000</u> candle power, whether incandescent or arc lights						

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

Where are the switches controlling the masthead and side lights placed Chart Room

DESCRIPTION OF CABLES.

Main cable carrying	90.52 Amperes, comprised of	37	wires, each	16	S.W.G. diameter,	.117	square inches total sectional area
Branch cables carrying	10.72 Amperes, comprised of	11	wires, each	16	S.W.G. diameter,	.0354	square inches total sectional area
Branch cables carrying	8.7 Amperes, comprised of	11	wires, each	18	S.W.G. diameter,	.0188	square inches total sectional area
Leads to lamps carrying	7.25 Amperes, comprised of	11	wires, each	18	S.W.G. diameter,	.0188	square inches total sectional area
Branch cable for signal	5-1	11	wires, each	20	S.W.G. diameter,	.011	square inches total sectional area
Cargo light cables carrying	20.75 Amperes, comprised of	11	wires, each	18	S.W.G. diameter,	.0188	square inches total sectional area
Wireless	38.00	11	wires, each	16	S.W.G. diameter,	.0354	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Rubber insulated wires are used and protected with armour in holds + bunkers. Engine room wires are all enclosed in steel tubes.

Joints in cables, how made, insulated, and protected

Joints all soldered + wound with insulating tape, protected by bates.

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances _____ 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

Are there any joints in or branches from the cable leading from dynamo to main switch board

How are the cables led through the ship, and how protected Attached to hood secured to under side of beams.

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 *Lead covered wires are used*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *No switch or fuse in lamp room*

What special protection has been provided for the cables near boiler casings *Cables led through steel tubes.*

What special protection has been provided for the cables in engine room *" " " "*

How are cables carried through beams *Resting on lead brick in hole* through bulkheads, &c. *Lead.*

How are cables carried through decks *✓*

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 *Armoured wires are used & protected by wood Casings.*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *✓*

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 *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

Is the installation supplied with a voltmeter and with an amperemeter, fixed

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.

Skasuga

Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass *about 116 feet*

Distance between dynamo or electric motors and steering compass *about 176 feet.*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
5.1	about 26	about 256	
10.72	24	248	

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.

[Signature]

Builder's Signature.

Date

GENERAL REMARKS.

The installation has been made and 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

Committee's Minute

18/11/19.

[Signature]

Surveyor to Lloyd's Register of Shipping.

Imd. 11.—Transfer.

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.