

MON 21 JUL 1919

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2418.

Port of Kobe Date of First Survey 8th Feby Date of Last Survey 7th March No. of Visits five
 No. in Reg. Book on the Iron or Steel Single Screw Steamer Yone Maru Port belonging to The Harima Dockyard Company
 Built at O Harima By whom The Harima Dockyard Company When built 1919
 Owners The Harima Dockyard Company Owners' Address When fitted 1919
 Yard No. 11 Electric Light Installation fitted by The Harima Dockyard Company

DESCRIPTION OF DYNAMO, ENGINE, ETC.

*An additional dynamo & single cylinder steam engine 10 KW.
 110 volts, 91 amps. fitted 6/40.*

One direct current, open type Compound dynamo. Directly Coupled with high speed single engine

Capacity of Dynamo 13 KW Amperes at 110 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Engine Room

Position of Main Switch Board Alongside dynamo having switches to groups five of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each The Auxiliary board, but 5 switches

viz. Signal light - Saloon & Officers Quarters - Engineers Quarters
Crew space - Engine & boiler room & Wireless room

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 50 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 213 arranged in the following groups:—

A	<u>141 Tungsten</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>25.60</u> Amperes
B	<u>3 Carbon</u>	lights each of	<u>5</u>	candle power requiring a total current of	<u>.48</u> Amperes
C	<u>64 "</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>32.60</u> Amperes
D		lights each of		candle power requiring a total current of	Amperes
E		lights each of		candle power requiring a total current of	Amperes
	Mast head light with	<u>2</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>2.04</u> Amperes
	<u>Starboard</u> Side light with	<u>3</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>3.06</u> Amperes
	Cargo lights of			candle power, whether incandescent or arc lights	<u>64 total</u>

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	<u>118</u> Amperes, comprised of	<u>19</u> wires, each	<u>#16</u> L.S.G. diameter,	<u>0.06105</u> square inches total sectional area
Branch cables carrying	<u>6.18</u> Amperes, comprised of	<u>7</u> wires, each	<u>#20</u> L.S.G. diameter,	<u>0.0070</u> square inches total sectional area
Branch cables carrying	<u>16.3</u> Amperes, comprised of	<u>7</u> wires, each	<u>#16</u> L.S.G. diameter,	<u>0.0226</u> square inches total sectional area
Leads to lamps carrying	<u>28.2</u> Amperes, comprised of	<u>11</u> wires, each	<u>#16</u> L.S.G. diameter,	<u>0.0354</u> square inches total sectional area
Cargo light cables carrying	<u>13.1</u> Amperes, comprised of	<u>7</u> wires, each	<u>#18</u> L.S.G. diameter,	<u>0.012</u> square inches total sectional area
Wireless telegraph	<u>38.0</u> "	"	<u>#16</u>	<u>0.0354</u>

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Armoured wires used in holds & bunkers. Wires in E & B space are enclosed in steel tubes.

Joints in cables, how made, insulated, and protected Springs soldered & covered with insulating tape & protected in 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 Through armoured wires secured to wood panel bolted to 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 *Wires through steel tubes to ducts*

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

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

How are cables carried through beams *through holes with lead bushes* through bulkheads, &c. *Grand & nut with packing*

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*

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.

Skarings

Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass

Distance between dynamo or electric motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying	16.3	Amperes	about 30	feet from standard compass	about 180	feet from steering compass
A cable carrying	6.18	Amperes	~ 10	feet from standard compass	~ 200	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 Rule Requirements and worked satisfactorily on trial

It is submitted that this vessel is eligible for

ELEC. LIGHT.

REC. 22-7-19

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

Committee's Minute



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