

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2838

Port of YOKOHAMA Date of First Survey 6-4-21 Date of Last Survey 9-5-21 No. of Visits 6  
 No. in 5.5. Kōki Maru on the Steel S.S. Kōki Maru Port belonging to ATAMIMACHI  
 Reg. Book TOKYO Built at TOKYO By whom ISHIKAWAJIMA S.B. & E. COY When built 1921  
 Owners HASHIMOTO KISEN KAISHA Owners' Address  
 Card No. 330 Electric Light Installation fitted by ISHIKAWAJIMA S.B. & E. COY When fitted 1921

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Six pole D.C. generator direct coupled to two cylinder inverted steam engine

Capacity of Dynamo 150 Amperes at 100 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Eng Room bottom platform Whether single or double wire system is used double

Position of Main Switch Board Eng Room near dynamo having switches to groups A B C D E F G of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Eng Room (1-2) Boiler Room Upper deck (1-10) (two)  
Upper deck aft (1-8) Bridge (1-6) Lower deck fore (1-4) Poop (1-8)

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 no 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 yes

Are the fuses of non-oxidizable metal yes (tin lead alloy) and constructed to fuse at an excess of 85 per cent over the normal current

Are all fuses fitted in easily accessible positions yes Are the fuses of standard dimensions main only 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 six circuits arranged in the following groups :-

A Eng + Boiler Room	33 lights each of	16	candle power requiring a total current of	9.25	Amperes
B Fore and aft	9 lights each of	16 CP & 500W	candle power requiring a total current of	7	Amperes
C Mid fore	30 lights each of	16	candle power requiring a total current of	7.5	Amperes
D aft	23 lights each of	16	" " " " " " " "	5.75	"
E aft	15 lights each of	16 CP & 500W	candle power requiring a total current of	8.5	Amperes
F Navigation	5 lights each of	32	" " " " " " " "	4	"
G Wireless			candle power requiring a total current of	5.0	Amperes
2 Mast head light with	1 lamps each of	32	candle power requiring a total current of	1.6	Amperes
2 Side light with	1 lamps each of	32	candle power requiring a total current of	1.6	Amperes
20 Cargo lights of		32	candle power, whether incandescent or arc lights	incandescent	

If arc lights, what protection is provided against fire, sparks, &c. no arc lights

Where are the switches controlling the masthead and side lights placed chart room

## DESCRIPTION OF CABLES.

Main cable carrying	150 Amperes, comprised of	61 wires, each	17 S.W.G. diameter, .1525 square inches total sectional area
Branch cables carrying	7.5 Amperes, comprised of	7 wires, each	16 S.W.G. diameter, .0224 square inches total sectional area
Branch cables carrying	5.75 Amperes, comprised of	7 wires, each	20 S.W.G. diameter, .007 square inches total sectional area
Leads to lamps carrying	4 Amperes, comprised of	1 wires, each	18 S.W.G. diameter, .0018 square inches total sectional area
Cargo light cables carrying	9 Amperes, comprised of	7 wires, each	20 S.W.G. diameter, .007 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Armoured cable used throughout except in living rooms where lead covered wire is used

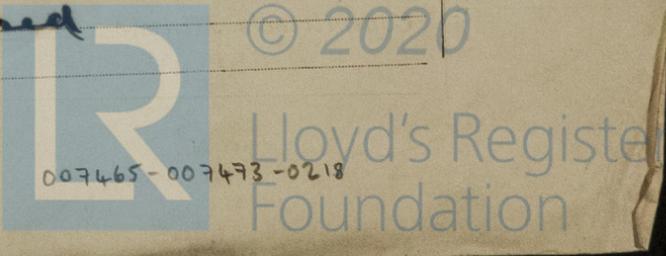
Joints in cables, how made, insulated, and protected Copper joint blocks in C.I. junction boxes

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

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 armoured wire used

Our additional 15-hp D.C. steam driven dynamo fitted at Kobe 4.41 No 11736



**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 armoured wire

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 armoured wire

What special protection has been provided for the cables in engine room armoured wire

How are cables carried through beams armoured wires lead through bulkheads, &c. armoured wire carried in

How are cables carried through decks in W.T. nipples

Are any cables run through coal bunkers no or cargo spaces yes or spaces which may be used for carrying cargo, stores, or baggage yes

If so, how are they protected armoured wire

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 no fittings

Where are the main switches and fuses for these lights fitted none fitted

If in the spaces, how are they specially protected none

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 double wire used

How are the returns from the lamps connected to the hull none

Are all the joints with the hull in accessible positions none

Is the installation supplied with a voltmeter yes, and with an amperemeter yes, fixed on main S.B.

**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 600 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.

Electrical Engineers Date 02

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 136 ft from dynamo 24 ft from Wichester motor

Distance between dynamo or electric motors and steering compass 131 " " " 20 " " " "

The nearest cables to the compasses are as follows:—

A cable carrying	<u>2</u> Amperes	<u>4</u> feet from standard compass	<u>5.5</u> feet from steering compass
A cable carrying	<u>1/4</u> Amperes	<u>0</u> feet from standard compass	<u>0</u> 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 yes

The maximum deviation due to electric currents, etc., was found to be Nil degrees on various course in the case of the standard compass and Nil degrees on various course in the case of the steering compass.

**THE ISHIKAWAJIMA SHIPBUILDING AND ENGINEERING CO., LTD., TOKYO.** T. Uchida Builder's Signature. Date 5-6-21

**GENERAL REMARKS.**

The installation of this vessel has been fitted in accordance with the Society's Rules. The materials and workmanship are good. The plant tried under working conditions and found satisfactory. Eligible in my opinion for notation in Register Book "ELECTRIC LIGHT"

It is submitted that this vessel is eligible for THE RECORD Elec Light Bell 1/8/21

Alex Ewing  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute ERT. 5A111 1921 TUE. JAN. 17 1922

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

Im. 7.19.—Transfer.

