

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2899

Port of Kok Date of First Survey 27-5-20 Date of Last Survey 17-6-20 No. of Visits 5
 No. in Reg. Book on the Iron Steel Single Screw St. "KISO MARU" Port belonging to Itosaki
 Built at Tama Dockyard, Uno. By whom Mitsui Bussan Kaisha When built 1920
 Owners Tokyo Kaiun Kabushiki Kaisha Owners' Address Tokyo.
 Yard No. 53 Electric Light Installation fitted by Tama Dockyard Co. Uno When fitted 1920

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One Compound Wound D. C. generator directly coupled to a single cylinder automatic cut off vertical enclosed non condensing engine forced lubri- 7" dia. x 5" stroke.

Capacity of Dynamo 12 K.W. 120 Amperes at 100 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed 5th side of Engine Room Whether single or double wire system is used Double

Position of Main Switch Board 5th side engine Room 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 1 in Engine Room, 1 in Boiler Room, 4 on dining deck, 1 in the lower bridge, each having one main switch on switchboard.

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 cessel 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 and constructed to fuse at an excess of 20 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 marble + porcelain

Total number of lights provided for 132 arranged in the following groups :-

A	26	lights each of	16 x 4	candle power requiring a total current of	12.8	Amperes
B	22	lights each of	16	candle power requiring a total current of	4.4	Amperes
C	6	lights each of	12	candle power requiring a total current of	4.2	Amperes
D	Wireless telegraphy	lights each of	3 K.W.	candle power requiring a total current of	30.0	Amperes
E	12	lights each of	16	candle power requiring a total current of	2.4	Amperes
F	34	lights each of	16 x 32	candle power requiring a total current of	10.8	Amperes
G	32	lights each of	16	candle power requiring a total current of	6.4	Amperes
	2	Mast head light with	2 lamps each of 32	candle power requiring a total current of	2.24	Amperes
	2	Side light with	2 lamps each of 32	candle power requiring a total current of	2.24	Amperes
	1	STERN LIGHT "	1 lamp of 32	candle power requiring a total current of	1.12	Amperes
	4	Cargo lights of	each 36	candle power, whether incandescent or arc lights	incandescent	

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

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

DESCRIPTION OF CABLES.

Main cable carrying 120 Amperes, comprised of 2 x 19 wires, each No. 19 S.W.G. diameter, 0.048 square inches total sectional area
 Branch cable 12.8 Amperes, comprised of 7 wires, each " 18 S.W.G. diameter, 0.013 square inches total sectional area
 Branch cables carrying 30.0 Amperes, comprised of 19 wires, each " 16 S.W.G. diameter, 0.061 square inches total sectional area
 Branch cable 10.8 Amperes, comprised of 19 wires, each " 19 S.W.G. diameter, 0.024 square inches total sectional area
 Branch cables carrying 4.4 Amperes, comprised of 7 wires, each " 18 S.W.G. diameter, 0.013 square inches total sectional area
 Leads to lamps carrying 0.5 Amperes, comprised of 1 wires, each " 18 S.W.G. diameter, 0.0018 square inches total sectional area
 Cargo light cables carrying 5 Amperes, comprised of 108 wires, each " 36 S.W.G. diameter, 0.00488 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Conductors are double insulated by pure rubber + vulcanised rubber, some covered by lead + others by cotton braid. Cables are protected by steel wire armouring against mechanical injury.

Joints in cables, how made, insulated, and protected Mechanical joints are made throughout and protected with water tight cast iron joint box and insulated by porcelain or slate bases

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 Cables are led unconcealed without any additional protection except that on the cables themselves.



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 Protected by their own covering

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat as before

What special protection has been provided for the cables near boiler casings as before

What special protection has been provided for the cables in engine room where necessary led through iron pipe

How are cables carried through beams Pierced + clipped through bulkheads, &c. Water tight glands.

How are cables carried through decks Pierced + led through W.T. iron pipe.

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 By their own armoured covering.

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 fuses for these lights fitted ✓

If in the spaces, how are they specially protected ✓

Are any switches or fuses fitted in bunkers ✓

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 yes and with an amperemeter yes, fixed on the main switch board

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 yes

Are any switches, fuses, 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 ✓

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.

M. Sackis

Electrical Engineers

Date 21st June 1920

COMPASSES.

Distance between dynamo or electric motors and standard compass 75 feet

Distance between dynamo or electric motors and steering compass 72 feet

The nearest cables to the compasses are as follows:—

A cable carrying <u>5</u> Amperes	<u>7</u> feet from standard compass	<u>12</u> feet from steering compass
A cable carrying <u>100.0</u> Amperes	<u>81</u> feet from standard compass	<u>80.5</u> feet from steering compass
A cable carrying <u>250.0</u> Amperes	<u>81</u> feet from standard compass	<u>80.5</u> 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 2.0 degrees on 200 course in the case of the standard compass and 2.0 degrees on 200 course in the case of the steering compass.

FOR MITSUI BUSSAN KAISHA, LTD.

J. Kubo

Builder's Signature.

Date 21st June 1920

GENERAL REMARKS. SHIP BUILDING DEPARTMENT.

This installation has been fitted in accordance with the requirements of the Rules and worked satisfactorily on trials.

It is submitted that this vessel is eligible for

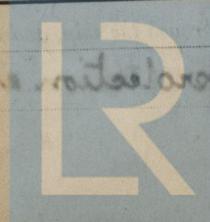
Elec Lt
Roll
7/10/20

J. G. Fry

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 15 MAR. 1921



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.