Rpt. 13.

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REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2994

Port of Kobe Date of First Survey Sept. 3rd 20 Date of Last Survey Sept. 24th 20 No. of Visits 4

No. in Reg. Book ____ on the Iron or Steel S/S. "YPRES MARU" Port belonging to Oh, Harima

Built at Oh, Harima By whom Harima Dockyard When built 1920

Owners Teikoku Steamship Co. Owners' Address Kobe

Yard No. 45 Electric Light Installation fitted by Harima Dockyard When fitted 1920

DESCRIPTION OF DYNAMO, ENGINE, ETC.

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

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

Where is Dynamo fixed Starboard in Engine Room Whether single or double wire system is used Double

Position of Main Switch Board Side by the 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 Engine + Boiler, Amid + Crew space, Saloon + Bridge, Cargo light, Navigation light fan motor, + Wireless telegraph,

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 yes

Are the fuses of non-oxidizable metal Yes and constructed to fuse at an excess of 50 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 yes

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

A Engine + Boiler	2 / 36	lights each of	400 / 32 / 16	candle power requiring a total current of	11.27	Amperes
G Wireless Telegraphy			3 kilo W.		38	"
B Amid + Crew	79	lights each of	16	candle power requiring a total current of	14.36	Amperes
C Saloon + Bridge	46 / 1	lights each of	16 / 32	candle power requiring a total current of	12.36	Amperes
D Cargo light	2 / 28	lights each of	1000 / 32	candle power requiring a total current of	19.26	Amperes
E Navigation light	13 / 5	lights each of	16 / 32	candle power requiring a total current of	7.45	Amperes
F Fan motor	12" dia.	each of	40 watts 17 C.P.	candle power requiring a total current of	6.18	"
Mast head light with	2	lamps each of	32	candle power requiring a total current of	2.04	Amperes
Side lights with a storm	3	lamps each of	32	candle power requiring a total current of	3.06	Amperes

Cargo lights of 2 - 1000 C.P. 7 - cluster with 4 lamps @ 32 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	136	Amperes, comprised of	37	wires, each	# 16	S.W.G. diameter,	0.117	square inches total sectional area
Branch cables carrying	11.27	Amperes, comprised of	7	wires, each	# 18	S.W.G. diameter,	0.0125	square inches total sectional area
Branch cables carrying	14.36	Amperes, comprised of	7	wires, each	# 16	S.W.G. diameter,	0.022	square inches total sectional area
" " "	7.45		7		# 20		0.007	" " " " "
Leads to lamps carrying	12.36	Amperes, comprised of	7	wires, each	# 18	S.W.G. diameter,	0.0125	square inches total sectional area
" " "	6.18		7		# 20		0.007	" " " " "
Cargo light cables carrying	19.26	Amperes, comprised of	11	wires, each	# 16	S.W.G. diameter,	0.0354	square inches total sectional area
Branch cables carrying	3800	" " "	11		# 16	" "	0.0354	" " " " "

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Armoured wires are used in Engine + Boiler room and Cargo space.

Joints in cables, how made, insulated, and protected Cables are all jointed in the Joint Boxes which is made of iron and joints are soldered and wound with insulating tape.

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 Wires are cramped with clip on iron plate which is fastened to beams with bolts.

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 or steel armoured cables are used.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Lead covered or armoured wires are used.

What special protection has been provided for the cables near boiler casings armoured cables are used

What special protection has been provided for the cables in engine room Armoured cables are used except under grating

How are cables carried through beams bushed with lead *through bulkheads, &c.* Gland packing are used.

How are cables carried through decks Deck tubes are used

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 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 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* Fixed on deck space

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* yes

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 SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

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.

S. Kasuga *Electrical Engineers* *Date*

COMPASSES.

Distance between dynamo or electric motors and standard compass about 142 feet.

Distance between dynamo or electric motors and steering compass about 232 feet.

The nearest cables to the compasses are as follows:—

A cable carrying	7.45	*Amperes*	about 18	*feet from standard compass*	about 200	*feet from steering compass*
A cable carrying	5.8	*Amperes*	about 28	*feet from standard compass*	about 142	*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 without

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.*

THE TEIKOKU ELECTRIC CO., LTD.

S. Kasuga Director *Builder's Signature.* *Date*

GENERAL REMARKS. This installation has been 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 Lt

Bell

29/1/21

A. Batchelor for J. Bellock.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. FEB. 1 1921

2m,11,19.—Transfer.