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THUR, 14 JAN 1897

Received at London Office

REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 14840

Port of Glasgow Date of First Survey _____ Date of Last Survey 14th Dec 1896 No. of Visits _____
 No. in Reg. Book _____ on the Iron or Steel S. S. Kanagawa Maru Port belonging to Tokio
 Built at Meadowside Partick By whom Messrs W & W Henderson & Co When built 1896
 Owners Nippon Yusen Kaisha Owners Address Tokio Japan
 Yard No. 394 Electric Light Installation fitted by W. C. Martin & Co When fitted 1896.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

2 Compound Bellis Engines Vertical type working at 200 lbs steam pressure, coupled direct to 2 compound wound Dynamos.
 Capacity of Dynamo each 340 Amperes at 65 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed In engine room, starting Platform recess
 Position of Main Switch Board Mid Platform Engine Room having switches to groups A, B, C, D, E, F, G, H, of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Engine Room, Top, Port Side (1) Switch Engine Room Top Starboard (1) Switch, Saloon Entrance (1) Switch Forecastle lamp room (1) switch, Second cabin Pantry (1) switch.
 If cut outs are fitted on main switch board to the cables of main circuit yes and on each auxiliary switch boards 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 _____ arranged in the following groups:—

Group	Number of lights	Each of	Candle power	Requiring a total current of	Amperes
A	41	16		41	Amperes
	6	50		18	
B	42	16		42	Amperes
	6	50		18	
C	39	16		39	Amperes
	8	50		24	
D	23	16		23	Amperes
	6	50		18	
E	40	16		40	Amperes
	12	50		36	
a	Mast head light with D.F. lamp	each of 32		2	Amperes
b	= 9 lights each of	50		24	"
c	each Side light with D.F. lamps each of	32		4	Amperes
d	a projector for Suez Canal			60	
e	6 Cargo lights of	200			candle power, whether incandescent or arc lights <u>incandescent.</u>

arc lights, what protection is provided against fire, sparks, &c. An arc lamp fitted with lantern for navign of the Suez Canal, also search light Projector
 are the switches controlling the masthead and side lights placed In the lamp Room

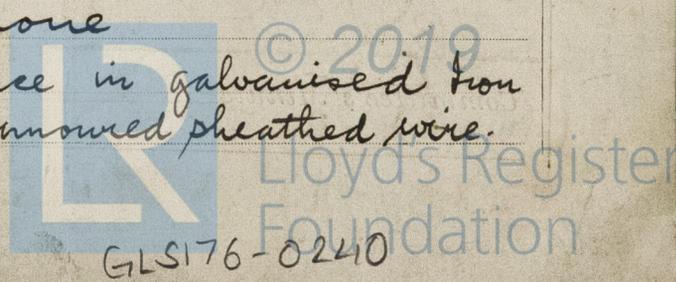
DESCRIPTION OF CABLES.

Carrying	Amperes	Comprised of	Wires	Each	L.S.G. diameter	Square inches total sectional area of one cable
354	313	37	12	.314	square inches total sectional area	
59		19	16	.0612	square inches total sectional area	
24		19	18	.0344	square inches total sectional area	
1		1	16	.00372	square inches total sectional area	
12		7	18	.00849	square inches total sectional area	

INSULATION, PROTECTION, ETC.

insulated with Pure india rubber, then vulcanised
ber, coated tape, the whole vulcanised together then
cotton preservative compound.
 insulated, and protected no joints

roughly soldered, resin only having been used as a flux none Are all joints in accessible positions, none being
 ces, or spaces which may at any time be used for carrying cargo, stores, or baggage none
 nches from the cable leading from dynamo to main switch board none
 through the ship, and how protected Through cargo space in galvanised iron
Forecastle for tween Deck lights, armoured sheathed wire.



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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 wires protected in galvanised iron pipes

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat, none near induc heat

What special protection has been provided for the cables near boiler casings iron pipe

What special protection has been provided for the cables in engine room Armour sheathed wires

How are cables carried through beams holes bushed with teak wood through bulkheads, &c. Teak wood & glands for water tight Bulkhead

How are cables carried through decks In tubes bushed with hard fibre.

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 Iron pipe & armour sheathed wire to lamps.

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

If so, how are the lamp fittings and cable terminals specially protected best iron covers

Where are the main switches and cut outs for these lights fitted Port alleyway main Deck & Engine Room

If in the spaces, how are they specially protected best Iron Covers

Are any switches or cut outs fitted in bunkers no

Cargo light cables, whether portable or permanently fixed Portable How fixed by portable fork connectors

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 2 _____ amperemeters fixed on Switchboard in engine room

The copper used is guaranteed to have a conductivity of 98 per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 2000 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.

W. C. Martin & Co Electrical Engineers Date 30th Dec. 18

COMPASSES.

Distance between dynamo or electric motors and standard compass 130 feet

Distance between dynamo or electric motors and steering compass 120 feet.

The nearest cables to the compasses are as follows:—

A cable carrying <u>about 60</u> Amperes <u>about 40</u> feet from standard compass <u>about 30</u> feet from steering compass
A cable carrying <u>50</u> Amperes <u>" 50</u> feet from standard compass <u>" 40</u> feet from steering compass
A cable carrying <u>50</u> Amperes <u>" 60</u> feet from standard compass <u>" 50</u> 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 each compass

standard compass and nil degrees on each course in the case of the steering compass.

David M. Henderson Builder's Signature Date 12

GENERAL REMARKS.

The two dynamo can be made to generate electricity for lamps but it is intended to work them separately, one dynamo for the arc lamps & one for the arc lamps. This installation appears to be in accordance with the Society's Rules

C. J. Brown

Surveyor to Lloyd's Register of British

Committee's Minute

REPORT FORM NO. 13.

NOT TO WRITE ACROSS THIS MARGIN

