

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 645

Port of Trieste Date of First Survey 15th April Date of Last Survey 20th July No. of Visits 18
 No. in Reg. Book on the Iron Steel S.S. Mongolia Port belonging to Vladivostok
 Built at Trieste By whom Stabilimento Tecnico When built 1901-6
 Owners Chinese Eastern Railway Co. Owners' Address Petersburg
 Yard No. 333 Electric Light Installation fitted by The Ostrovinch Schuepert-Werke When fitted 1901. 6

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two Dynamo compound mount, each coupled direct to one compound engine 8 1/4" x 13" x 8" R. 320.

Capacity of Dynamo 210. Amperes at 115 Volts, whether continuous ~~or~~ alternating current continuous.

Where is Dynamo fixed in Engine Room at most ship in a recess

Position of Main Switch Board near Dynamoes 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 15 switch Boards, placed on different parts of the ship, having altogether 69 switches.

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 20 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 372. arranged in the following groups:—

A	<u>240</u> ¹⁸⁵ / ₅₅	lights each of <u>16</u>	candle power requiring a total current of <u>80.72</u>	Amperes
B	<u>46</u>	lights each of <u>16</u>	candle power requiring a total current of <u>23.92</u>	Amperes
C	<u>22</u>	lights each of <u>16</u>	candle power requiring a total current of <u>11.44.</u>	Amperes
D	<u>36</u>	lights each of <u>16</u>	candle power requiring a total current of <u>18.72</u>	Amperes
E	<u>5</u>	<u>Ventilators</u> lights each of <u>3.2 Amp</u>	candle power requiring a total current of <u>16.00</u>	Amperes
	<u>2</u>	<u>one on each Mast head light with</u> <u>2</u> lamps each of <u>16</u>	candle power requiring a total current of <u>2.08</u>	Amperes
	<u>2</u>	<u>Side light with</u> <u>2</u> lamps each of <u>16</u>	candle power requiring a total current of <u>2.08</u>	Amperes
	<u>4</u>	<u>Cargo lights of 6 lamp each of 16</u>	requiring a total current candle power, whether incandescent <u>are</u> lights <u>12.48</u>	

If are lights, what protection is provided against fire, sparks, &c.
F - 5 Ventilators each of 2.6 amp. requiring a total current 13.00
G - Line for supplying the whole of 210 Amps to the landing stage in Vladivostok

Where are the switches controlling the masthead and side lights placed in the chart Room.

DESCRIPTION OF CABLES.

Main cable carrying 210 Amperes, comprised of 32 wires, each 13 L.S.G. diameter, .259 square inches total sectional area
 Branch cables carrying 80.72 Amperes, comprised of 19 wires, each 14 L.S.G. diameter, .095 square inches total sectional area
 Branch cables carrying 22.88 Amperes, comprised of 2 wires, each 14 L.S.G. diameter, .035 square inches total sectional area
 Leads to lamps carrying 10.52 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, .0020 square inches total sectional area
 Cargo light cables carrying 12.48 Amperes, comprised of 2 wires, each 17 L.S.G. diameter, .0125 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

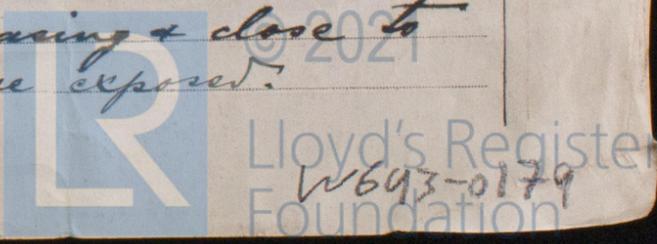
Wires carried through metall & steel Bergmann's tubes, where exposed to weather & through teak casing inside.

Joints in cables, how made, insulated, and protected India rubber tape, India solution, compound tape and varnished with India rubber solution.

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 none

Are there any joints in or branches from the cable leading from dynamo to main switch board none.

How are the cables led through the ship, and how protected in heavy wood casing & close to deck & through iron Bergmann tubes where exposed.



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 in teak casing & through metall & steel Bergmann's tubes.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat in steel tubes

What special protection has been provided for the cables near boiler casings etc.

What special protection has been provided for the cables in engine room etc.

How are cables carried through beams teak ferrules through bulkheads, &c. glands

How are cables carried through decks steel Bergmann's tubes.

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

If so, how are they protected —

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

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 —

Cargo light cables, whether portable ~~or permanently fixed~~ portable How fixed by bolts on deck, houses

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel double wire system.

How are the returns from the lamps connected to the hull —

Are all the joints with the hull in accessible positions yes

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 also supplied with 2 voltmeter and 2 amperemeter, fixed on the switchboard

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 600 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.

Osterreichische Schuckertwerke
i. V. W. Brankijam Electrical Engineers Date 29 July 1901

COMPASSES.

Distance between dynamo or electric motors and standard compass 41 feet.

Distance between dynamo or electric motors and steering compass 68 —

The nearest cables to the compasses are as follows:—

A cable carrying	<u>25.6</u>	Amperes	<u>18</u>	feet from standard compass	<u>24</u>	feet from steering compass
A cable carrying	<u>6.8</u>	Amperes	<u>8</u>	feet from standard compass	<u>15</u>	feet from steering compass
A cable carrying	<u>2.</u>	Amperes		feet from standard compass	<u>3</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 any course in the case of the standard compass with Deviation degrees on any course in the case of the steering compass.

Stabilimento tecnico Triestino Builder's Signature. Date 29 July 1901

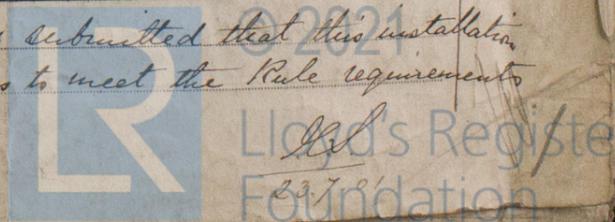
GENERAL REMARKS.

The complete electric lighting installation including dynamo & motor has been supplied & fitted by Messrs The Osterreichische Schuckert-Werke in Vienna. The workmanship is of a good description and in accordance with the Rules & in my opinion worthy of the Committee's consideration.

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

Committee's Minute

It is submitted that this installation appears to meet the Rule requirements



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 14.