

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 652

Port of *Trieste* Date of First Survey *10th July* Date of Last Survey *23rd Aug* No. of Visits *11*
 No. in Reg. Book on the *Iron* Steel *S.S. Austria* Port belonging to *Trieste*
 Built at *Trieste* By whom *Lloyd's Arsenal* When built *190.5*
 Owners *Lloyd Austrians* Owners' Address *Lloyd Austrians Trieste*
 Yard No. *62* Electric Light Installation fitted by *G. Galatti Trieste* When fitted *1901*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

The Dynamo compound wound coupled direct to one Compound engine *9" x 13" x 16 Stroke & 400 Revs.*

Capacity of Dynamo *250* Amperes at *100* Volts, whether continuous ~~or~~ alternating current *continuous*

Where is Dynamo fixed *in Engine Room, starting platform Starboard side*

Position of Main Switch Board *near Dynamo* having switches to groups *A. B. C. D. E* of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each *6 switch Boards placed on different parts of the ship having altogether 13 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 *350* arranged in the following groups:—

A *3 arc* lights each of *5 amper.* candle power requiring a total current of *15* Amperes

B *80 incandescent* lights each of *16* candle power requiring a total current of *52* Amperes

C *230 —* lights each of *10* candle power requiring a total current of *89.01* Amperes

D *40 —* lights each of *16* candle power requiring a total current of *26.40* Amperes

E *3 arc* lights each of *5 amp.* candle power requiring a total current of *15.00* Amperes

2 one on each Mast head light with *1* lamps each of *32* candle power requiring a total current of *2.08* Amperes

2 Side light with *1* lamps each of *32* candle power requiring a total current of *2.08* Amperes

6 arc Cargo lights of *5 Amps. each.* candle power, whether incandescent or arc lights

If arc lights, what protection is provided against fire, sparks, &c. *by means of large glass globes and metal guards*

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

DESCRIPTION OF CABLES.

Main cable carrying *202* Amperes, comprised of *32* wires, each *13* L.S.G. diameter, *.222* square inches total sectional area

Branch cables carrying *89* Amperes, comprised of *19* wires, each *14* L.S.G. diameter, *.095* square inches total sectional area

Branch cables carrying *52* Amperes, comprised of *19* wires, each *16* L.S.G. diameter, *.057* square inches total sectional area

Leads to lamps carrying *06* Amperes, comprised of *1* wires, each *18* L.S.G. diameter, *.0020* square inches total sectional area

Cargo light cables carrying *15* Amperes, comprised of *19* wires, each *19* L.S.G. diameter, *.0285* square inches total sectional area

DESCRIPTION OF INSULATION PROTECTION, ETC.

Wires carried through metal & iron tubes where exposed to weather & through wood 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 the deck & through iron tubes where exposed*

DESCRIPTION OF INSTALLATION, 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 lead casing & through iron tubes.

What special protection has been provided for the cables near gas lamps or other sources of heat in iron tubes

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

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

How are cables carried through beams lead frames through bulkheads, &c. glands

How are cables carried through decks glands & iron tubes

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 through iron tubes.

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

If so, how are the lamp fittings and cable terminals specially protected strong glass & metal guards

Where are the main switches and cut outs for these lights fitted in Engine room & on deck houses.

If in the spaces, how are they specially protected none

Are any switches or cut outs fitted in bunkers none

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 a voltmeter and One Volt + One ampere meter, 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 the vessel and we declare that it is at this date in good order and safe working condition.

Eng. C. Pestretti Galati Electrical Engineers Date 24 August 1901

COMPASSES.

Distance between dynamo or electric motors and standard compass 80 feet

Distance between dynamo or electric motors and steering compass 92 ft

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>32</u>	<u>21</u>	<u>32</u>	<u>—</u>
<u>5</u>	<u>8</u>	<u>—</u>	<u>—</u>
<u>16</u>	<u>—</u>	<u>12</u>	<u>—</u>

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

G. Smith Builder's Signature. Date 24 August 1901

GENERAL REMARKS. The complete electric lighting installation including dynamo has been supplied & fitted by J. Galati, Trieste. The workmanship is of good and in accordance with the Rules & in my opinion worthy of the Committee's consideration.

Rob Dussiel

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

Committee's Minute.

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



Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 11.