

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1559

Port of Trieste Date of First Survey 9/11/06 Date of Last Survey 7/12/06 No. of Visits 8  
 No. in 1 on Steel S. S. Vorwaerts Port belonging to Trieste  
 Book Sub 9 Built at Trieste By whom Lloyd Austriaco When built 1906-12  
 Owners Lloyd Austriaco Owners' Address Lloyd Austriaco Trieste  
 Yard No. 97 Electric Light Installation fitted by G. Galatti When fitted 1906-12

**DESCRIPTION OF DYNAMO, ENGINE, ETC.**

Dynamo Continuous Current 2 Vertical Compound Engines by M. Paul.  
 Capacity of Dynamo 230 Amperes at 110 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed Engine Room starting platform  
 Position of Main Switch Board Engine Room having switches to groups ten of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each 1 switch in the Captains cabin

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 no  
 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 100 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 :-

A	12	lights each of	16	candle power requiring a total current of	4.4	Amperes	
A'	18	lights each of	16	candle power requiring a total current of	6.6	Amperes	
B	18	lights each of	16	candle power requiring a total current of	6.6	Amperes	
B'	12	lights each of	16	candle power requiring a total current of	4.4	Amperes	
C	112	lights each of	10-16	candle power requiring a total current of	44	Amperes	
C'	53	lights each of	16	candle power requiring a total current of	44	Amperes	
D	112	lights each of	5-16	candle power requiring a total current of	19.3	Amperes	
D'	28	lights each of	16	candle power requiring a total current of	39.	Amperes	
E	46	lights each of	Fans	candle power requiring a total current of	10.02	Amperes	
2	Mast head light with	1	lamps each of	16	candle power requiring a total current of	23.	Amperes
2	Side light with	1	lamps each of	16	candle power requiring a total current of	1	Amperes
11	Cargo lights of	: / 78 lights / 1248		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 Captains Cabin

**DESCRIPTION OF CABLES.**

Main cable carrying 185 Amperes, comprised of 74 wires, each 17 L.S.G. diameter, 0.182 square inches total sectional area  
 Branch cables carrying 92.6 Amperes, comprised of 37 wires, each 17 L.S.G. diameter, 0.091 square inches total sectional area  
 Branch cables carrying 60 Amperes, comprised of 24 wires, each 17 L.S.G. diameter, 0.059 square inches total sectional area  
 Leads to lamps carrying 25 Amperes, comprised of 1 wires, each L.S.G. diameter, 0.0002 square inches total sectional area  
 Cargo light cables carrying 6 Amperes, comprised of 1 wires, each L.S.G. diameter, square inches total sectional area

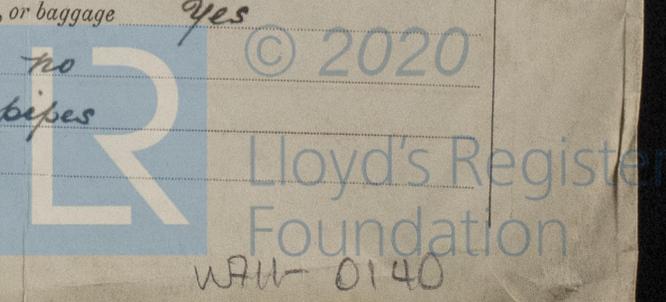
**DESCRIPTION OF INSULATION, PROTECTION, ETC.**

of copper with a double insulation of vulcanizing india-rubber and over all an insulated ribbon

Joints in cables, how made, insulated, and protected by iron casings

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 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 steel insulating pipes



**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 pipes

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

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

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

How are cables carried through beams metal tubes lined with vulcanized fibre through bulkheads, &c. the same

How are cables carried through decks the same as above

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 steel insulating pipes

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 cut outs for these lights fitted —

If in the spaces, how are they specially protected —

Are any switches or cut outs fitted in bunkers no

Cargo light cables, whether portable or permanently fixed portable How fixed Screwed joints

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 — an amperemeter, fixed —

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.

*Tr. G. Pedretti*  
*Il Direttore Tecnico*

Electrical Engineers

Date 17/12/06.

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 100 feet

Distance between dynamo or electric motors and steering compass 150 "

The nearest cables to the compasses are as follows:—

A cable carrying	<u>60</u>	Amperes	<u>40</u>	feet from standard compass	<u>40</u>	feet from steering compass
A cable carrying	<u>20</u>	Amperes	<u>30</u>	feet from standard compass	<u>40</u>	feet from steering compass
A cable carrying	<u>3</u>	Amperes	<u>15</u>	feet from standard compass	<u>15</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 0 degrees on Trial course in the case of the standard compass and 0 degrees on Trial course in the case of the steering compass.

*Jim Mackay*

Builder's Signature.

Date 17/12/06

**GENERAL REMARKS.**

The workmanship is good

*Chas R Hughes*

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

Committee's Minute

It is submitted that the Record Elec. Light be noted in the Reg. Book.

Lloyd's Register Foundation

21.12.06

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.