

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2342

Port of *Trieste* Date of First Survey *14.12.09* Date of Last Survey *20.1.10* No. of Visits *7*
 No. in Reg. Book on the ~~Iron~~ *Steel* *S.S. "Gastein"* Port belonging to *Trieste*
 Built at *Trieste* By whom *Lloyd Austriaco* When built *1910-1*
 Owners *Lloyd Austriaco* Owners' Address *Lloyd Austriaco*
 Yard No. *119* Electric Light Installation fitted by *Lloyd Arsenale* When fitted *1910-1*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two Dynamos direct coupled to two compound Engines made by M. Paul of Dumbarton. Dynamos supplied by A. E. G. Union of Vienna.

Capacity of Dynamos *10/227 + 1/182* Amperes at *110* Volts, whether continuous or alternating current *continuous*

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

Position of Main Switch Board *Engine Room* having switches to groups *387* of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each *1 for Engine Room with 5 switches in Engine Room*
1 for tween decks and fans & hold with 8 switches in Engine Room, 1 for signal lamps with 10 switches in Wheel house.

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 cessel 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 *387* arranged in the following groups:—

A	Number	42	lights each of	16-10	candle power requiring a total current of	22.43	Amperes
A1	"	59	"	"	"	29.89	"
B	"	63	lights each of	"	candle power requiring a total current of	22.05	Amperes
B1	"	57	"	"	"	24.57	"
C	"	29	lights each of	"	candle power requiring a total current of	11.83	Amperes
C1	"	55	"	32-5	"	19.25	"
D	"	15	lights each of	16	candle power requiring a total current of	8.4	Amperes
D1	"	25	"	16	"	13.37	"
E	"	42	lights each of	16	candle power requiring a total current of	23.53	Amperes
2	Mast head light with	2	lamps each of	16	candle power requiring a total current of	} To be included in the above Amperes	
2	Side light with	2	lamps each of	32	candle power requiring a total current of		
42	Cargo lights of	16	"	"	candle power, whether incandescent or arc lights		

If are lights, what protection is provided against fire, sparks, &c. *None fitted*

Where are the switches controlling the masthead and side lights placed *in the Wheelhouse on the bridge*

DESCRIPTION OF CABLES.

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A	Main cable carrying	175.3	Amperes, comprised of	34-37	wires, each	3.45-2.05	L.S.G. diameter,	165-130	square inches	total sectional area
A	Branch	22.4	"	7	"	1.4	"	16	square inches	total sectional area
B	Branch cables carrying	39.89	Amperes, comprised of	7	wires, each	1.4	L.S.G. diameter,	16	square inches	total sectional area
B	"	22.15	"	7	"	1.4	"	16	square inches	total sectional area
C	Branch cables carrying	24.57	Amperes, comprised of	19	wires, each	1.2	L.S.G. diameter,	25	square inches	total sectional area
C	"	11.83	"	7	"	1.3	"	10	square inches	total sectional area
D	Leads to lamps carrying	19.25	Amperes, comprised of	7	wires, each	1.4	L.S.G. diameter,	16	square inches	total sectional area
D	"	8.11	"	7	"	1.05	"	6	square inches	total sectional area
E	Cargo light cables carrying	28.52	Amperes, comprised of	7	wires, each	1.4	L.S.G. diameter,	16	square inches	total sectional area
E	"	13.37	"	7	"	1.3	"	10	square inches	total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

The cables for holds, engine and boiler spaces, and out houses on the Deck are protected with Bergmanns steel pipes, all other cables are well insulated and protected in the usual approved manner.

Joints in cables, how made, insulated, and protected *All joints in cables are soldered and insulated with rubber band, tape and made waterproof with insulating tape.*

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 *Bergmanns steel pipes in exposed part of the vessel and Engine and Boiler Rooms, hard wood casing elsewhere.*



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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 *Bergmanns pipes and made watertight*

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

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

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

How are cables carried through beams *fibre bushes and also hardwood* through bulkheads, &c. *Stuffing boxes*

How are cables carried through decks *Bergmanns steel pipes and wood bushes*

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 *Steel pipes*

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 *The lamps by thick glass and iron gratings*

Where are the main switches and cut outs for these lights fitted *In Engine Room on Main Deck*

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 *permanent leads* How fixed *portable cables with screwed socket in watertight wood boxes*

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

The installation is *One* supplied with a voltmeter and *One* an amperemeter, fixed *in Engine Room*

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 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.

COMPASSES.

Distance between dynamo or electric motors and standard compass *about 80 feet*

Distance between dynamo or electric motors and steering compass *135 feet*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>10</i>	<i>13.5</i>	<i>5</i>	
A cable carrying	Amperes	feet from standard compass	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 *Yes*

The maximum deviation due to electric currents, etc., was found to be *Nil* degrees on *a varying* course in the case of the standard compass and *Nil* degrees on *Nil* course in the case of the steering compass.

GENERAL REMARKS.

The installation has been supplied by the International Electrizität Gesellschaft of Vienna, and fitted on the vessel by the Lloyd Arsenal. The material and workmanship and fittings being good

It is submitted that this vessel is eligible for THE RECORD. Elec. light-

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

Committee's Minute

FRI. 27 MAY 1910



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.