

# REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 4456\*

Port of *Hamburg* Date of First Survey *Oct. 12<sup>th</sup> 1897* Date of Last Survey *24<sup>th</sup> 1897* No. of Visits *3*  
 No. in Reg. Book *54* on the *Steel* *S.S. "Octavia"* Port belonging to *Hamburg*  
 Built at *Stensburg* By whom *Stensburger Schiffbau-Ges.* When built *1897*  
 Owners *Hamburg-Pacific-Linie* Owners Address *Hamburg*  
 Yard No. *170* Electric Light Installation fitted by *Stensburger Schiffbau-Ges.* When fitted *1897*

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

*Schuckerts Compound wound Dynamo coupled direct to a pair of Compound Engines, running at 400 to 500 Rev. p. min.*  
 Capacity of Dynamo *72* Amperes at *100* Volts, whether continuous or alternating current *continuous*  
 Where is Dynamo fixed *Engine Room*  
 Position of Main Switch Board *Engine Room* having switches to groups *5* of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each *Mainroom 9 switches, Pantry 10 switches and Chart house 5 switches.*

If cut outs are fitted on main switch board to the cables of main circuit *no* 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 *25* 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 *133* arranged in the following groups:—

A Tunnel	6 lights each of	16	candle power requiring a total current of	3 Amperes
B Pantry + Main	100 lights each of	"	candle power requiring a total current of	50 Amperes
C Engine R. R.	6 lights each of	"	candle power requiring a total current of	3 Amperes
D Boiler Room	15 lights each of	"	candle power requiring a total current of	7.5 Amperes
E Eng. R. Port	6 lights each of	"	candle power requiring a total current of	3 Amperes
1 Mast head light with	2 lamps each of	"	candle power requiring a total current of	1 Amperes
2 Side light with	2 lamps each of	"	candle power requiring a total current of	2 Amperes
4 Cargo lights of		80	candle power, whether incandescent or arc lights	incandescent

If arc lights, what protection is provided against fire, sparks, &c. *yes*

Where are the switches controlling the masthead and side lights placed *Chart house*

## DESCRIPTION OF CABLES.

Main cable carrying *75* Amperes, comprised of *19* wires, each *4mm* L.S.G. diameter, *35* square inches total sectional area  
 Branch cables carrying *26* Amperes, comprised of *1* wires, each *4mm* L.S.G. diameter, *16* square inches total sectional area  
 Branch cables carrying *4.5* Amperes, comprised of *1* wires, each *4mm* L.S.G. diameter, *4.5* square inches total sectional area  
 Leads to lamps carrying *.5* Amperes, comprised of *1* wires, each *4mm* L.S.G. diameter, *1.5* square inches total sectional area  
 Cargo light cables carrying *80* Amperes, comprised of *7* wires, each *4mm* L.S.G. diameter, *10* square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

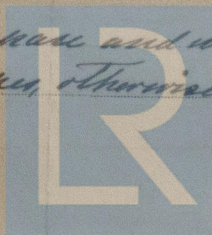
*Copper wires tinned, covered with Para Rubber, layer of vulcanized cotton, coated with hump tape impregnated with contactant varnish. Cables exposed to heat or moisture are Iron bound.*

Joints in cables, how made, insulated, and protected *soldered, coated with rubber and 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 *in Engine + Boiler space and where exposed to heat or moisture cables are Iron bound or lead through pipes, otherwise in wood battens.*





# 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 *Iron bound cables*

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

What special protection has been provided for the cables near boiler casings *no*

What special protection has been provided for the cables in engine room *no*

How are cables carried through beams *through hardwood frames through bulkheads, &c. through hardwood for*

How are cables carried through decks *through brass pipes lined with hardwood*

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 *no*

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 *no*

Where are the main switches and cut outs for these lights fitted *no*

If in the spaces, how are they specially protected *no*

Are any switches or cut outs fitted in bunkers *no*

Cargo light cables, whether portable or permanently fixed *portable* How fixed *by brass plate fitted with screws*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *by brass screws and washers*

How are the returns from the lamps connected to the hull *yes*

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 *an amperemeter, fixed on their starboard*

The installation is *yes* supplied with a voltmeter and *yes*

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 *50* Millions Siemens units megohms

*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 state that it is at this date in good order and safe working condition.

Electrical Engineers

Date

## COMPASSES.

Distance between dynamo or electric motors and standard compass *70 ft.*

Distance between dynamo or electric motors and steering compass *45 ft.*

The nearest cables to the compasses are as follows:— *all laid on the double wire system near compass*

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>.5</i>	<i>15</i>	<i>8</i>	<i>8</i>
<i>.5</i>	<i>15</i>	<i>8</i>	<i>8</i>
<i>—</i>	<i>—</i>	<i>—</i>	<i>—</i>

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 *imperceptible* degrees on course in the case of the steering compass.

standard compass and *imperceptible* degrees on course in the case of the steering compass.

**Flensburger-Schiffsbau-Gesellschaft.**

Builder's Signature

Date

## GENERAL REMARKS.

*The electric light installation on board of this vessel is in my opinion in conformity with the Regulations and fit for vessel to be classed in the Society's Register Book.*

*M. Brown*

Surveyor to Lloyd's Register of British and Foreign Ships

Committee's Minute

*This installation appears to be safe*

**L** Lloyd's Register Foundation