

MON. JUL. 31 1911

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 12206

Port of *Hamburg* Date of First Survey *18<sup>th</sup> May* Date of Last Survey *15<sup>th</sup> July* No. of Visits *11*  
 No. in Reg. Book on the *Iron or Steel* *S.S. "Adelaide"* Port belonging to *Hamburg*  
 Built at *Hamburg* By whom *Deutsch. Schiffbau-Ges.* When built *1911*  
 Owners *Deutsch-deutscher Lloyd - Ges.* Owners' Address *Hamburg, Lägerhof*  
 Yard No. *309* Electric Light Installation fitted by *the Builders* When fitted *1911*

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

*Compound Steam Engine made by C. Duval, Kiel, coupled direct to a Siemens-Schuckert Dynamo running at 340 revolutions p. minute.*  
 Capacity of Dynamo *120* Amperes at *110* Volts, whether continuous or alternating current *continuous*  
 Where is Dynamo fixed *Engine Room* Whether single or double wire system is used *double*  
 Position of Main Switch Board *Engine Room* 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 *1 in Steam Steering Engine room with 4 switches, 1 in Saloon-Messroom with 9 switches, 1 under Forecastle with 3 switches, 1 in Chartroom with 5 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-oxidisable 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 *177* arranged in the following groups:—  
 A *Eng. & Mr. Sp.* 36 lights each of *16* candle power requiring a total current of *15* Amperes  
 B *Midshipman* 31 lights each of *16* candle power requiring a total current of *13* Amperes  
 C *Forward Mess.* 51 lights each of *16* candle power requiring a total current of *22* Amperes  
 D *Forecastle* 12 lights each of *16* candle power requiring a total current of *5* Amperes  
 E *Chartroom* 5 lights each of *8 of 25, 1 of 16* candle power requiring a total current of *8* Amperes  
 E { 2 Mast head lights with 1 lamp each of *25* candle power requiring a total current of *1.3* Amperes  
 2 Side light with 1 lamp each of *25* candle power requiring a total current of *1.3* Amperes  
 1 Stern light with 1 lamp of *16* candle power, whether incandescent or arc lights *incandescent*  
 8 Cargo lights of *4 x 6 x 16 = 672* candle power, whether incandescent or arc lights *incandescent*  
 If arc lights, what protection is provided against fire, sparks, &c. *Glass globes.*

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

## DESCRIPTION OF CABLES.

Cable Description	Amperes	Wires	L.S.G. diameter	square inches	total sectional area
Main cable carrying	120	37	1.20	1.44	77.5
Branch cables carrying	25	19	0.35	0.39	16
Branch cables carrying	15	7	0.25	0.39	9.7
Leads to lamps carrying	4.5	1	1.5	0.39	0.29
Cargo light cables carrying	2.8	24	1.5	0.39	1.8

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

*Main & Branch Cables: Copper lined, coated with Para Rubber, coated with insulating jute tape, lead bound, spun with jute band, double iron bound, spun with jute and asphalted. Lead & Copper Leads: Copper lined coated with coal-tar or Rubber, spun with jute insulation.*  
 Joints in cables, how made, insulated, and protected *Soldered and covered with caulked & tape for lamp circuits and leads; metallic corner joints in watertight boxes on incombustible base for Main and Branch Cables.*

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 *Main and branch cables carried open, except where they are exposed to heat and moisture, where they are led in Iron Pipes. Lead and copper leads are protected by wood batten.*



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 head, covered cables, protected by iron pipes where exposed to heat & moisture*

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 *yes*

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

How are cables carried through beams *hard wood bunks* through bulkheads, &c. *scanned beam bunks*

How are cables carried through decks *Iron galvanized standpipes 8" high filled with non-conducting asphalt.*

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 *yes*

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 *yes*

Where are the main switches and cut outs for these lights fitted *yes*

If in the spaces, how are they specially protected *yes*

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

Cargo light cables, whether portable or permanently fixed *portable* How fixed *yes*

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

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

Are all the joints with the hull in accessible positions *yes*

The installation is *yes* supplied with a voltmeter and *yes* an amperemeter, fixed *Main Switch board*

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 *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 Williams Insulation* 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.

*The Builders are the* Electrical Engineers Date *yes*

COMPASSES.

Distance between dynamo or electric motors and standard compass *132 ft.*

Distance between dynamo or electric motors and steering compass *128 ft.*

The nearest cables to the compasses are as follows:—

A cable carrying *.45* Amperes *close to* feet from standard compass *close to* feet from steering compass

A cable carrying *yes* Amperes *yes* feet from standard compass *yes* feet from steering compass

A cable carrying *yes* Amperes *yes* feet from standard compass *yes* 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 *insignificant* degrees on *yes* course in the case of the

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

**Mensburger Schiffsbau-Gesellschaft.**

*Mann*

Builder's Signature. Date *12<sup>th</sup> July 1911.*

GENERAL REMARKS. *The Electric Light installation on board of this vessel is in my opinion fitted in accordance with the Society's Rules and eligible to be recorded "Elec. light" in the Society's Register Book.*

*It is submitted that this vessel is eligible for THE RECORD Elec. light. JWD 4/8/11*

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

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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