

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 9555*

Port of *Hamburg* Date of First Survey *10th Jan. 07* Date of Last Survey *4th Jan. 07* No. of Visits *8*
 No. on the *Iron or Steel* *S. S. "Schlesien"* Port belonging to *Bremen*
 Reg. Book *Built at* *Hamburg* By whom *Hamburg Schiffb.-G.* When built *1907*
 Owners *Vordendeutscher Lloyd* Owners' Address *Bremen*
 Yard No. *270* Electric Light Installation fitted by *Hamburg Schiffb.-G.* When fitted *1907*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Compound Steam Engine coupled direct to dynamo made by Vordendeutscher Maschinen- & Apparaten-Fabrik, Bremen, running at 300 rev. p. min.

Capacity of Dynamo *100* Amperes at *110* Volts, whether continuous or alternating current *continuous*

Where is Dynamo fixed *Engine Room*

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

Positions of auxiliary switch boards and numbers of switches on each *1. Engine casing with 7 switches, 2. Boiler room with 6 switches, 3. Boiler casing with 6 switches, 4. Engine Room with 5 switches, 5. Pumping with 7 switches, 6. Charthouse with 5 switches, 7. Forecastle w. 4 sw., 8. Prop. w. 3 sw.*

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

Are the cut outs of non-oxidizable metal *yes* and constructed to fuse at an excess of *30* 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 *142* arranged in the following groups:—

A *Midship* *68* lights each of *16, 2 of 25 & 2 of 35* candle power requiring a total current of *40* Amperes
 B *Forward* *30* lights each of *19 of 16, 1 of 25* candle power requiring a total current of *12.5* Amperes
 C *Aft* *30* lights each of *19 of 16, 1 of 25* candle power requiring a total current of *12.5* Amperes
 D *Eng. & M. Rm.* *34* lights each of *16* candle power requiring a total current of *20* Amperes
 E *—* lights each of *—* candle power requiring a total current of *—* Amperes

2 Mast head light with *1* lamps each of *25* candle power requiring a total current of *2* Amperes
2 Side light with *1* lamps each of *35* candle power requiring a total current of *3* Amperes

18 Cargo lights of *6 of 5X16-80, 12 of 16* candle power, *whether* incandescent *or* *are* lights *incl. in A, B, C.*

If are lights, what protection is provided against fire, sparks, &c. *—*

Where are the switches controlling the masthead and side lights placed *In Charthouse*

DESCRIPTION OF CABLES.

Main cable carrying *100* Amperes, comprised of *19* wires, each *2.5* L.S.G. diameter, *50* square inches total sectional area
 Branch cables carrying *40* Amperes, comprised of *7* wires, each *5* L.S.G. diameter, *35* square inches total sectional area
 Branch cables carrying *20* Amperes, comprised of *7* wires, each *2.5* L.S.G. diameter, *16* square inches total sectional area
 Leads to lamps carrying *14.6* Amperes, comprised of *1* wires, each *2.5 X 1.5* L.S.G. diameter, *2.5 X 1.5* square inches total sectional area
 Cargo light cables carrying *5.6* Amperes, comprised of *35* wires, each *1.07* L.S.G. diameter, *3.5* square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

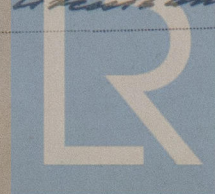
Main & Branch Cables: Copper twisted, covered with Para rubber, coated with impregnated jute tape, lead covered, again with impregnated jute, double iron banded and jute again. Circuit & Lamp leads: Tinned copper wires coated with candlewax and rubber.
 Joints in cables, how made, insulated, and protected *Soldered and covered with candlewax and tape for lamp circuits and leads. Metallic screw joints for Main and Branch cables, contained in watertight boxes.*

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 & Branch cables carried open, except where they are exposed to heat, where they are carried in iron pipes. Circuit and lamp leads protected by wood batten.*



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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 Iron bound, lead covered cables.

Cables protected by Iron boxes where exposed to heat.

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 ja ja

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

How are cables carried through beams hardwood bunks through bulkheads, &c. covered brass bunks

How are cables carried through decks Iron galvanized clasp pipes & 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 —

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

If so, how are the lamp fittings and cable terminals specially protected by special, waterproof, flameless fittings

Where are the main switches and cut outs for these lights fitted in Engine Room

If in the spaces, how are they specially protected Lamps protected by strong glass globes and gratings

Are any switches or cut outs fitted in bunkers no

Cargo light cables, whether portable or permanently fixed portable How fixed —

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel Double wired throughout

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 yes supplied with a voltmeter and yes an amperemeter, fixed Main Switch Board

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 Million Siemens units 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 —

COMPASSES.

Distance between dynamo or electric motors and standard compass abt. 110 ft.

Distance between dynamo or electric motors and steering compass — 100 —

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>.6</u>	<u>close to</u>	<u>close to</u>	<u>—</u>
<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
<u>—</u>	<u>—</u>	<u>—</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 — course in the case of the standard compass and nil degrees on — course in the case of the steering compass.

Flensburger Schiffsbau-Gesellschaft.

Builder's Signature. Date 4th March 1907

GENERAL REMARKS.

The electric Light installation on board of this vessel is in my opinion fitted in conformity with the Society's Rules and eligible to be recorded "Elec. Light" in the Society's Register Book.

Mr. Hansson
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.

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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.