

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 9408*

Port of *Hamburg* Date of First Survey *30th April* Date of Last Survey *18th May 07* No. of Visits *6*
 Description of *No. in on the ~~Iron~~ Steel *P.C. "Neumünster"* Port belonging to *Hamburg**
 of adjustment *2nd class* Built at *Hamburg* By whom *Hamburgischer Schiffbau-Ges.* When built *1907*
 Length *120* Owners *Deutscher-Amerikanischer Dampfschiff-Fahr-Ges.* Owners' Address *Hamburg*
 Card No. *269* Electric Light Installation fitted by *Hamburgischer Schiffbau-Ges.* When fitted *1907*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One Compound Steam Engine, coupled direct to dynamo from the Norddeutscher Maschinen- & Schiffbau-Fabrik, Bremen, running at abt. 400 revs. p. min.
 Capacity of Dynamo *43* Amperes at *110* Volts, whether continuous or alternating current *continuous*
 Where is Dynamo fixed *Engine Room - Double wire system throughout*
 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 *Group A. switchboard from Main Switchboard, Group B. switchboard with 5 switches in Steering Engine Room, Group C. switchboard with 6 switches in passage of deckhouse, Group D. switchboard with 5 switches in Steering house.*
 Are cut outs 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-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*

Rods *37/2* Total number of lights provided for *13* arranged in the following groups:—
 Propeller *27/2* Eng. & Ma. Space *13* lights each of *16* candle power requiring a total current of *8* Amperes
 Main bolts *45-07* Main Space *24* lights each of *16* candle power requiring a total current of *15* Amperes
 Mast *18/5-07* Mast Space *24* lights each of *16* candle power requiring a total current of *15* Amperes
 Steering house *8* lights each of *4 of 16, 2 of 32, 2 of 32* candle power requiring a total current of *7* Amperes
 Mark on Do. *134* lights each of *—* candle power requiring a total current of *—* Amperes
 Marks on Do. *116* lights each of *—* candle power requiring a total current of *—* Amperes
 Mast head light with *2* lamps each of *16 + 32* candle power requiring a total current of *2* Amperes
 Side light with *2* lamps each of *16 + 32* candle power requiring a total current of *2* Amperes
 Cargo lights of each *6 x 32 = 192* candle power, whether incandescent or arc lights *incandescent*
 Are lights, what protection is provided against fire, sparks, &c. *yes*

There are the switches controlling the masthead and side lights placed *In Steering house*

DESCRIPTION OF CABLES.

Cable Description	Amperes	Wires	L.S.G. diameter	Square inches	Total sectional area
Main cable carrying	40	7	3.5	3.5	24.5
Branch cables carrying	15	7	10.5	10.5	73.5
Branch cables carrying	8	1	4	4	4
Leads to lamps carrying	1.5	1	1.5	1.5	1.5
Cargo light cables carrying	6	16	2.5	2.5	40

DESCRIPTION OF INSULATION, PROTECTION, ETC.

The main cables & branch cables & copper, lined, covered with Para rubber, sealed with in-
 equalled jute tape, lead covered, space with impregnated jute band, double Para band
 and jute space. Leads of lamps and lamp leads: Tinned copper wire coated
 with caoutchouc and rubber.
 Joints in cables, how made, insulated, and protected *Soldered and covered with caoutchouc and tape for lamps*
 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, exposed to heat and moisture, where they are carried in iron pipes. Leads to lamps 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 lead covered cables.*
Cables protected by iron tubes 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 *yes*

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

How are cables carried through beams *handwood bushes* through bulkheads, &c. *secured brass bushes*

How are cables carried through decks *Iron galvanized standpipes 8" high filled with nonconductive*
being 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 *Double wired throughout.*

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 *yes*

Are any switches, cut outs, or joints of cables fitted in the pump room or companion *yes*

How are the lamps specially protected in places liable to the accumulation of vapour or gas *yes*

The installation is *yes* supplied with a voltmeter and *yes* an amperemeter, fixed *Yes. Switchboard.*

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 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 *11th May 1907*

COMPASSES.

Distance between dynamo or electric motors and standard compass *96 ft.*

Distance between dynamo or electric motors and steering compass *85 ft.*

The nearest cables to the compasses are as follows:—

A cable carrying *.6* Amperes *close to* feet from standard compass *close to* feet from steering compass

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 *—* course in the case of the

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

Flensburg Schiffsbau-Gesellschaft.

Builder's Signature, *[Signature]*

Date *11th May 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 Books."
Wm. Rasmussen

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

Committee's Minute

TUES. 28 MAY 1907

TUES. 19 NOV 1907

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



Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.