

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 9408\*

Port of Hamburg Date of First Survey 30<sup>th</sup> April Date of Last Survey 18<sup>th</sup> May 97 No. of Visits 6  
 Description of No. in on the Iron Steel 10. 10. "Neumünster" Port belonging to Hamburg  
 of adjustment eg. Book 2. 1. 1. Built at Flensburg By whom Flensburger Schiffbau-Ges. When built 1907  
 Length 27 ft. Owners Deutsche-Werke AG - Hamburg Owners' Address Hamburg  
 Card No. 269 Electric Light Installation fitted by Flensburger Schiffbau-Ges. When fitted 1907

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

One Compound Steam Engine, coupled direct to dynamo from the Norddeutsche Maschinen- & Apparaten-Fabrik, Bremen, running at abt. 400 rev. 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 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-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 35/2 total number of lights provided for arranged in the following groups :-

Propeller <u>27/2</u> Eng. & Ma. Space	13 lights each of	16	candle power requiring a total current of	8	Amperes
Down bolts <u>45-07</u> 1st Cabin	24 lights each of	16	candle power requiring a total current of	15	Amperes
<u>18/5-07</u> 2nd Cabin	24 lights each of	16	candle power requiring a total current of	15	Amperes
<u>4/14-7/16</u> 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. <u>134</u>	lights each of		candle power requiring a total current of		Amperes
Mark on Do. <u>116</u>	2 Mast head light with	2 lamps each of 16 + 32	candle power requiring a total current of	2	Amperes
	2 Side light with	2 lamps each of 16 + 32	candle power requiring a total current of	2	Amperes
	5 (30 lamps) Cargo lights of each	6 x 32 = 192	candle power, whether incandescent or arc lights		incandescent

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

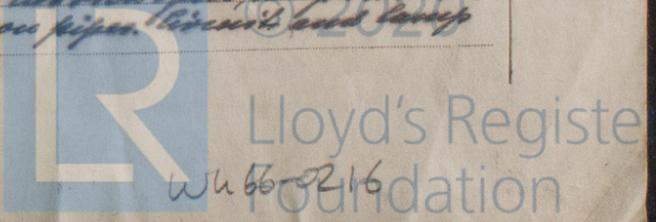
There are the switches controlling the masthead and side lights placed In Steering house

## DESCRIPTION OF CABLES.

Main cable carrying	40 Amperes, comprised of	7 wires, each	L.S.G. diameter,	3.5	square inches total sectional area
Branch cables carrying	15 Amperes, comprised of	7 wires, each	L.S.G. diameter,	10.5	square inches total sectional area
Branch cables carrying	8 Amperes, comprised of	1 wires, each	L.S.G. diameter,	4	square inches total sectional area
Leads to lamps carrying	15 Amperes, comprised of	1 wires, each	L.S.G. diameter,	1.5	square inches total sectional area
Cargo light cables carrying	6 Amperes, comprised of	16 wires, each	L.S.G. diameter,	2.5	square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

The main cables & branch cables Copper, twisted, covered with Para rubber, sealed with impregnated jute tape, lead covered, space with impregnated jute band, double Span bonded lead 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 and lamp leads are protected by 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 bands 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 bands 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 *hardwood bushes* through bulkheads, &c. *serewed brass bushes*

How are cables carried through decks *Iron galvanized standpipes 8" high fitted with nonconductive lining except.*

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. Panel 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 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 <i>.6</i> Amperes <i>close to</i> feet from standard compass <i>close to</i> feet from steering compass
A cable carrying <i>—</i> Amperes <i>—</i> feet from standard compass <i>—</i> feet from steering compass
A cable carrying <i>—</i> Amperes <i>—</i> feet from standard compass <i>—</i> 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.

*Flensburger Schiffsbau-Gesellschaft.* Builder's 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 should 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* It is submitted that the Record Dec. Light be noted in the Reg. Books. *TUES. 19 MAY 1907*



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM NO. 13.