

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 7304

Port of Rotterdam Date of First Survey 9 May Date of Last Survey 28 June No. of Visits 4  
 No. in Reg. Book on the Iron Steel Iron Stamer "Oranje Nassau" Port belonging to Amsterdam  
 Built at Blissingen By whom Ron. Vrij. de Schelde When built 1911  
 Owners Ron. West Indische Mail Owners' Address Amsterdam  
 Yard No. 139 Electric Light Installation fitted by J. van der Polder When fitted 1911

**DESCRIPTION OF DYNAMO, ENGINE, ETC.**

There are placed two dynamos, each dynamo direct coupled with an vertical working steam engine

Capacity of Dynamos each 160 Amperes at 110 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed On the bows to the left engine room Whether single or double wire system is used double wire

Position of Main Switch Board Near the dynamo having switches to groups 8 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Auxiliary switch boards are placed in the corridors; each with four having switches for 12 lamps

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 cessel 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 100 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 272 arranged in the following groups:—

A	32	lights each of	16	candle power requiring a total current of	16	Amperes
B	63	lights each of	16	candle power requiring a total current of	31½	Amperes
C	30	lights each of	16	16-8-100-32 candle power requiring a total current of	15	Amperes
D	29	lights each of	16	16-8 candle power requiring a total current of	13½	Amperes
E	36	lights each of	16	candle power requiring a total current of	18	Amperes
2	Mast head light with	1 lamp each of	32	candle power requiring a total current of	1,16	Amperes
2	Side light with	1 lamp each of	32	candle power requiring a total current of	2,32	Amperes
8	Cargo lights of	5 lamps	16	candle power, whether incandescent or arc lights	incandescent	

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

Where are the switches controlling the masthead and side lights placed in the wheel house on the bridge

**DESCRIPTION OF CABLES.**

Main cable carrying 160 Amperes, comprised of 37 wires, each 2 mm  $\phi$  L.S.G. diameter, 120 square inches total sectional area

Branch cables carrying 15 Amperes, comprised of 19 wires, each 1.53 mm  $\phi$  L.S.G. diameter, 35 square inches total sectional area

Branch cables carrying 10 Amperes, comprised of 7 wires, each 1.71 mm  $\phi$  L.S.G. diameter, 16 square inches total sectional area

Leads to lamps carrying ½ Amperes, comprised of 1 wires, each 1.47 mm  $\phi$  L.S.G. diameter, ½ square inches total sectional area

Cargo light cables carrying 2½ Amperes, comprised of 2 x 40 wires, each 0.2 mm  $\phi$  L.S.G. diameter, 2 x 1½ square inches total sectional area

**DESCRIPTION OF INSULATION, PROTECTION, ETC.**

Cable of tinned copper, one layer of para, 1 layer of vulcanised india rubber, an india rubber ribbon, the whole together covered with braided cotton

Joints in cables, how made, insulated, and protected There are no joints in cables

Joints of cables in the switch and auxiliary boards are soldered and screened

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 cables are led in a wooden protection or in galvanised iron tubes

Req. by Elec. Eng. Rules 130 97



**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 *they are led thru in galvanised iron tubes* ✓  
 What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *no special protection*  
 What special protection has been provided for the cables near boiler casings *cables are armoured* ✓  
 What special protection has been provided for the cables in engine room *armoured* ✓  
 How are cables carried through beams *by watertight glands through bulkheads, &c.* *by watertight glands*  
 How are cables carried through decks *by tubes of brass* ✓  
 Are any cables run through coal bunkers *no* or cargo spaces *yes* or spaces which may be used for carrying cargo, stores, or baggage *yes* ✓  
 If so, how are they protected *iron tubes (galvanised)* ✓  
 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 \_\_\_\_\_  
 Where are the main switches and cut outs for these lights fitted \_\_\_\_\_  
 If in the spaces, how are they specially protected \_\_\_\_\_  
 Are any switches or cut outs fitted in bunkers *no* ✓  
 Cargo light cables, whether portable or permanently fixed *portable* ✓ How fixed *by connecting boxes* ✓  
 In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel \_\_\_\_\_  
 How are the returns from the lamps connected to the hull \_\_\_\_\_  
 Are all the joints with the hull in accessible positions \_\_\_\_\_  
 The installation is \_\_\_\_\_ supplied with  $\frac{1}{2}$  voltmeters and \_\_\_\_\_  $\frac{1}{2}$  ampere-meter, fixed *to the with 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 \_\_\_\_\_

The copper used is guaranteed to have a conductivity of *75-98* per cent. that of pure copper. *See Art. 2, 4-9-11*  
 Insulation of cables is guaranteed to have a resistance of not less than *600* 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.

*J. J. van der Poll & Co.* Electrical Engineers Date \_\_\_\_\_

**COMPASSES.**

Distance between dynamo or electric motors and standard compass *110 feet*  
 Distance between dynamo or electric motors and steering compass *104 feet*  
 The nearest cables to the compasses are as follows:—  
 A cable carrying *10* Amperes *12* feet from standard compass *9* feet from steering compass  
 A cable carrying *1/2* Amperes *for the lamp in* feet from standard compass *9* feet from steering compass  
 A cable carrying *1/2* Amperes " " " " feet from standard compass *in the feet from steering compass*  
 Have the compasses been adjusted with and without the electric installation at work at full power *at full power*  
 The maximum deviation due to electric currents, etc., was found to be *0°* degrees on *N 29° E* course in the case of the standard compass and *0°* degrees on *N 30° E* course in the case of the steering compass.

*Waarmerk Maatschappij „De Scheide“*  
*Scheepsbouw en Werktuigenfabriek* *J. van der Poll* Builder's Signature. Date *8 July 1911*

**GENERAL REMARKS.** *The installation has been fitted in accordance with the Rules, worked satisfactory, when tried and merits in my opinion the approval of the Committee*

*It is submitted that this vessel is eligible for THE RECORD, Elec. Light*  
*J. A. Blom*  
 Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

