

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 4826<sup>d</sup>

Port of Rotterdam Date of First Survey 25/5/06 Date of Last Survey 12/6/06 No. of Visits three  
 No. in Reg. Book 637 on the ~~Iron or Steel~~ S.S. Tjibodas Port belonging to Amsterdam  
 Built at Rotterdam By whom Ettablissement Feyenoos When built 1906  
 Owners Jave, Chine, Jape, Len Owners' Address Amsterdam  
 Yard No. 209 Electric Light Installation fitted by Geveke & Co. Amsterdam When fitted 1906

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

Steam dynamo from "De Electro Technische Industrie" Schipboer

Capacity of Dynamo 145 Amperes at 85 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed at Harboord.

Position of Main Switch Board at Harboord having switches to groups 5 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each 15 auxiliary switch boards with each a double pole cut out.

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-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 229 arranged in the following groups:—

A	<u>20</u>	lights each of <u>16</u>	candle power requiring a total current of <u>14</u>	Amperes
B	<u>31</u>	lights each of <u>16</u>	candle power requiring a total current of <u>18</u>	Amperes
C	<u>10-19-2</u>	lights each of <u>8-10-25</u>	candle power requiring a total current of <u>29</u>	Amperes
D	<u>16-19-1</u>	lights each of <u>8-10-25</u>	candle power requiring a total current of <u>25</u>	Amperes
E	<u>13-10-1</u>	lights each of <u>8-10-32</u>	candle power requiring a total current of <u>24.3</u>	Amperes
	<u>2</u>	Mast head light with <u>1</u> lamp each of <u>32</u>	candle power requiring a total current of <u>3.15</u>	Amperes
	<u>2</u>	Side light with <u>1</u> lamp each of <u>25</u>	candle power requiring a total current of <u>2.00</u>	Amperes
	<u>32</u>	Cargo lights of <u>16</u>	candle power, whether incandescent or arc lights <u>30</u>	

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

Where are the switches controlling the masthead and side lights placed in the chart house.

**DESCRIPTION OF CABLES.**

Main cable carrying 210 Amperes, comprised of 37 wires, each 3/32" L.S.G. diameter, 3/16" square inches total sectional area

Branch cables carrying 100.00 Amperes, comprised of 19 each wires, each 1/40"-1/16" L.S.G. diameter, 1/15"-1/10" square inches total sectional area

Branch cables carrying 140.140 Amperes, comprised of 30 wires, each 1/16"-1/18" L.S.G. diameter, 1/10"-1/15" square inches total sectional area

Leads to lamps carrying 10 Amperes, comprised of 1 wires, each 1/10" L.S.G. diameter, 1/10" square inches total sectional area

Cargo light cables carrying 20 Amperes, comprised of 10 wires, each 1/11" L.S.G. diameter, 1/16" square inches total sectional area

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

The India-Rubber wires have the following insulation: The tinned copper wire is covered with a water tight vulcanised rubber coat and india rubber tape and a black impregnated twisted cotton.

Joints in cables, how made, insulated, and protected no joints in 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 yes



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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 *Teak wood wire casings. No cables exposed to weather, all under shelter.*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Steel wire braid*

What special protection has been provided for the cables near boiler casings *Steel wire armour and braid.*

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

How are cables carried through beams *Lead leading in tubes through bulkheads, &c. Stuffing boxes.*

How are cables carried through decks *cross deck leading in tubes.*

Are any cables run through coal bunkers *no* or cargo spaces *no* or spaces which may be used for carrying cargo, stores, or baggage *yes*

If so, how are they protected *in bunkers only, in cargo spaces in teak wood wire casings and specially protected by a fir wood casing.*

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

If so, how are the lamp fittings and cable terminals specially protected *hull-eyes lamps, & strong iron gratings.*

Where are the main switches and cut outs for these lights fitted *in the engine room, further near the*

If in the spaces, how are they specially protected *different lamps.*

Are any switches or cut outs fitted in bunkers

Cargo light cables, whether portable or permanently fixed *portable* How fixed *with plug keys.*

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

**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 supplied with a voltmeter and an amperemeter, fixed

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 *1000 (above 25 sq mm) / 600 (under . . .)* 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.

*G. J. G. G.* Electrical Engineers Date *11-7-06*

**COMPASSES.**

Distance between dynamo or electric motors and standard compass *120 ft*

Distance between dynamo or electric motors and steering compass *110 ft*

The nearest cables to the compasses are as follows:—

A cable carrying <i>2 x 10 sq mm</i> 2 Amperes	13 feet from standard compass	7 feet from steering compass
A cable carrying <i>2 x 25 sq mm</i> 10 Amperes	16 feet from standard compass	10 feet from steering compass
A cable carrying <i>2 x 1/2 sq mm</i> 0.08 Amperes	13 feet from standard compass	7 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 *0* degrees on *—* course in the case of the standard compass and *0* degrees on *—* course in the case of the steering compass.

ETABLISSEMENT FIJENOOR Afd: Boesepbouw. Builder's Signature. Date *July 9, 1906*

GENERAL REMARKS. *The electric light installation has been led through the vessel in accordance with the Rules, worked satisfactory during the trials and did not affect the Compasses.*

*W. G. D. van Olfen*  
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.*



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 13.