

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 6850.

Port of *Amsterdam* Date of First Survey *16 August* Date of Last Survey *15 Oct 1915* No. of Visits *13*.No. in on the ~~Iron~~ *Steel* *The twin screw m/o Mera* Port belonging to *Groenewald*  
Reg. Book *211* Built at *Dordrecht* By whom *N.V. Scheepswerk Dordrecht* When built *1915*Owners *Ned Ind Tankstoomboot Maatschappij* Owners' Address *Groenewald*  
Yard No. *23* Electric Light Installation fitted by *Groenewald Ruempold* When fitted *1915*

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

*Open interpole type direct coupled to a Kromhout Motor.*Capacity of Dynamo *26* Amperes at *110* Volts, whether continuous or alternating current *Continuous*Where is Dynamo fixed *in Motorroom PS* Whether single or double wire system is used *double*Position of Main Switch Board *Near dynamo* having switches to groups *7 groups* of lights, &c., as belowPositions of auxiliary switch boards and numbers of switches on each *in Distributing box.**One PS near dynamo. One Entrance messroom. One 2 Engineers room. One chartroom. One in Engine room SB. One W.C. SB. One Carpenter workshop.*If fuses 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 fuses fitted to both flow and return wires or cables of all circuits including lamp circuits *Both*Are the fuses of non-oxidizable metal *Yes* and constructed to fuse at an excess of *100 %* per cent over the normal currentAre all fuses fitted in easily accessible positions *Yes* Are the fuses of standard dimensions *Yes* If wire fuses are usedare permanent instructions fitted on or near each switch board giving particulars of proper size of fuse for each circuit *Yes*Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases *Yes.*Total number of lights provided for *60 lights* arranged in the following groups :-

A	<i>10</i>	lights each of <i>16</i>	candle power requiring a total current of <i>2.5</i>	Amperes
B	<i>6</i>	lights each of <i>16</i>	candle power requiring a total current of <i>1.5</i>	Amperes
C	<i>8</i>	lights each of <i>16</i>	candle power requiring a total current of <i>2.</i>	Amperes
D	<i>8</i>	lights each of <i>16</i>	candle power requiring a total current of <i>2.</i>	Amperes
E	<i>12</i>	lights each of <i>16</i>	candle power requiring a total current of <i>3</i>	Amperes
<i>1</i>	<i>Mast head light with 1</i>	<i>lamps each of 32</i>	candle power requiring a total current of <i>0.5</i>	Amperes
<i>2</i>	<i>Side light with 2</i>	<i>lamps each of 32</i>	candle power requiring a total current of <i>0.5</i>	Amperes
<i>4</i>	<i>Cargo lights of 4 lamps each of 16 C.P.</i>	candle power, whether incandescent or are lights <i>incandescent</i>		

If are lights, what protection is provided against fire, sparks, &c. *None*Where are the switches controlling the masthead and side lights placed *in Chartroom*

## DESCRIPTION OF CABLES.

Main cable carrying <i>26</i> Amperes, comprised of <i>4</i> wires, each <i>17</i> S.W.G. diameter, <i>.016</i> square inches total sectional area
Branch cables carrying <i>26</i> Amperes, comprised of <i>4</i> wires, each <i>19</i> S.W.G. diameter, <i>.0096</i> square inches total sectional area
Branch cables carrying <i>26</i> Amperes, comprised of <i>1</i> wires, each <i>17</i> S.W.G. diameter, <i>.0024</i> square inches total sectional area
Leads to lamps carrying <i>26</i> Amperes, comprised of <i>1</i> wires, each <i>17</i> S.W.G. diameter, <i>.0024</i> square inches total sectional area
Cargo light cables carrying <i>26</i> Amperes, comprised of <i>1</i> wires, each <i>17</i> S.W.G. diameter, <i>.0024</i> square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

*Tinned copper wire insulated with vulcanized india rubber (two sheaths) protected with braided cotton and tape, the whole vulcanized together. Armoured for Cargo lights.*Joints in cables, how made, insulated, and protected *None*Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances *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 *wood sheath. Steel tubing*



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 protected wire in steel tubes.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat protected, with steel tubes.

What special protection has been provided for the cables near boiler casings ✓

What special protection has been provided for the cables in engine room Armoured wire in steel tubes.

How are cables carried through beams ✓ through bulkheads, &c. Steel tubes

How are cables carried through decks Steel screwed plug.

Are any cables run through coal bunkers ✓ or cargo spaces ✓ or spaces which may be used for carrying cargo, stores, or baggage ✓

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 No

If so, how are the lamp fittings and cable terminals specially protected ✓

Where are the main switches and fuses for these lights fitted ✓

If in the spaces, how are they specially protected ✓

Are any switches or fuses fitted in bunkers ✓

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 ✓

How are the returns from the lamps connected to the hull ✓

Are all the joints with the hull in accessible positions ✓

Is the installation supplied with a voltmeter Yes and with an amperemeter Yes, fixed on switchboard

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and fuses fitted in positions not liable to the accumulation of petroleum vapour or gas Yes

Are any switches, fuses, or joints of cables fitted in the pump room or companion No

How are the lamps specially protected in places liable to the accumulation of vapour or gas None

The copper used is guaranteed to have a conductivity of not less than that of the Engineering Standards Committee's standard and the wires are protected by tinning from the sulphur compounds present in the insulating material.

Insulation of cables is guaranteed to have a resistance of not less than 600 megohms per statute mile at 60° Fahrenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than 500 volts and while the cable is still immersed.

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.

COMPASSES.

Distance between dynamo or electric motors and standard compass 40 feet

Distance between dynamo or electric motors and steering compass 35 "

The nearest cables to the compasses are as follows:—

Cable	Amperes	Feet from standard compass	Feet from steering compass
A cable carrying <u>0.25</u>	<u>4</u>	<u>4</u>	<u>4</u>
A cable carrying <u>0.25</u>	<u>1</u>	<u>4</u>	<u>4</u>
A cable carrying <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 ✓ standard compass and ✓ degrees on ✓ course in the case of the steering compass.

Builder's Signature. Date 27 November 1915

GENERAL REMARKS. This electric light installation has been fitted in most efficient manner and proved to be upon 24 hours trial in a good working condition, no heating or hitches whatever.

It is submitted that this vessel is eligible for THE RECORD Elec. light.

J. H. H. H. 19/1/16

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

Committee's Minute FRI. 21 JAN. 1916