

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 6560.

Port of Amsterdam Date of First Survey 24 March Date of Last Survey 22 May No. of Visits 6  
 No. in Reg. Book on the ~~Iron or Steel~~ Motor vessel Lara Port belonging to J. Gravenhage  
4814 Built at Rotterdam By whom Gebr. Rot When built 1915  
 Owners Ned. Indische Bank Stoomvaart Maatschappij Owners' Address J. Gravenhage  
 Yard No. Electric Light Installation fitted by Messrs. Bultschoten & Bouwens When fitted 1915

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

One dynamo coupled up and driven by a Kromhout Crude oil motor

Capacity of Dynamo 39 Amperes at 110 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed in motor space Whether single or double wire system is used double

Position of Main Switch Board near dynamo having switches to groups four of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each No auxiliary switch boards, only distribution boxes in different places, each with one double pole switch and one

double pole fuse for the whole box and double pole fuses for each lamp circuit

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 Yes

Are the fuses of non-oxidisable metal Yes and constructed to fuse at an excess of 100 per cent over the normal current

Are all fuses 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 fuses constructed of incombustible materials and fitted on incombustible bases Yes

Total number of lights provided for 49 arranged in the following groups:—

A	<u>25</u>	lights each of	<u>32</u>	candle power requiring a total current of	<u>8</u>	Amperes
B	<u>25</u>	lights each of	<u>32</u>	candle power requiring a total current of	<u>8</u>	Amperes
C	<u>15</u>	lights each of	<u>32</u>	candle power requiring a total current of	<u>5</u>	Amperes
D	<u>12</u>	lights each of	<u>32</u>	candle power requiring a total current of	<u>4</u>	Amperes
E	<u>1</u>	lights each of	<u>32</u>	candle power requiring a total current of	<u>0.5</u>	Amperes
<u>1</u>	Mast head light with <u>1</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>0.6</u>	Amperes	
<u>2</u>	Side light with <u>1</u> lamps each of	<u>32</u>	candle power, whether incandescent or arc lights <u>incandescent</u>			
<u>2</u>	Cargo lights of <u>6</u> lamps each of	<u>32</u>				

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

Where are the switches controlling the masthead and side lights placed in Chautroom

## DESCRIPTION OF CABLES.

Main cable carrying 8 Amperes, comprised of 4 wires, each 1.35 S.W.G. diameter, 10 square inches total sectional area  
 Branch cables carrying 4 Amperes, comprised of 1 wires, each 1.78 S.W.G. diameter, 2.5 square inches total sectional area  
 Branch cables carrying — Amperes, comprised of — wires, each — S.W.G. diameter, — square inches total sectional area  
 Leads to lamps carrying — Amperes, comprised of — wires, each — S.W.G. diameter, — square inches total sectional area  
 Cargo light cables carrying — Amperes, comprised of — wires, each — S.W.G. diameter, — square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Annexed Copper wire, insulated with white vulcanized India rubber. In black vulcanized india rubber. It Coated tape, lead covered. In Engine room lead covered and armoured with galvanized wire

Joints in cables, how made, insulated, and protected No joints

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 through galvanized tubes.

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

**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 galvanized tubes

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat galvanized tubes

What special protection has been provided for the cables near boiler casings no boilers

What special protection has been provided for the cables in engine room Lead Covered and Armoured

How are cables carried through beams hard wood fittings through bulkheads, &c. ditto

How are cables carried through decks Brass glands

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

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 No

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 Sketch board

**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 no lamps there

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 500 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.

[Signature] Electrical Engineers Date 29<sup>th</sup> May 1915

**COMPASSES.**

Distance between dynamo or electric motors and standard compass + 40 feet

Distance between dynamo or electric motors and steering compass + 50 "

The nearest cables to the compasses are as follows:—

A cable carrying	<u>4</u>	Amperes	<u>about 15</u>	feet from standard compass	<u>about 15</u>	feet from steering compass
A cable carrying	<u>✓</u>	Amperes	<u>✓</u>	feet from standard compass	<u>✓</u>	feet from steering compass
A cable carrying	<u>✓</u>	Amperes	<u>✓</u>	feet from standard compass	<u>✓</u>	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 ✓ degrees on ✓ course in the case of the steering compass.

[Signature] Builder's Signature. Date

**GENERAL REMARKS.** The Electric light installation of this vessel has been fitted in accordance with the Rules of this Society and proved to be during several days run, to be in an efficient condition no heating or hitches whatever

It is submitted that this vessel is eligible for THE RECORD. Elec. light. J.W.D. 14/6/15. [Signature] Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

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