

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 12138.

Port of *Rotterdam* Date of First Survey *18.10.11* Date of Last Survey *30.1.21* No. of Visits *5*
 No. in *on the Iron or Steel* *CHRISTIANBORG* Port belonging to *Copenhagen*
 Reg. Book Built at *Abblasferdam* By whom *Jan Lunt Can* When built *1911*
 Owners *C. K. Hansen* Owners' address *Copenhagen*
 Yard No. *403* Electric Light Installation fitted by *Peterson & Hovumhus* When fitted *1911*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One steamdynamo, consisting of double acting steam engine, direct coupled to compound wound dynamo.

Capacity of Dynamo *100* Amperes at *110* Volts, whether continuous or alternating current *continuous*

Where is Dynamo fixed *in engine room* Whether single or double wire system is used *double wire*

Position of Main Switch Board *in marconiroom* having switches to groups *5* of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each *auxiliary switchboard with 4 switches for the lights in engine room, placed in engine room; distribution boxes in different places*

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-oxidizable 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

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases *yes*

Total number of lights provided for *224* arranged in the following groups:—

A *65 lights*: 3 lights each of *4000 c.p.*, *62* each of *32* candle power requiring a total current of *27* Amperes

B *55* " : 3 lights each of *1000 c.p.*, *62* " *32* candle power requiring a total current of *36* Amperes

C *14* " : all lights each of *32* candle power requiring a total current of *4* Amperes

D *54* " : 2 lights each of *1000 c.p.*, *52* each of *32* candle power requiring a total current of *29* Amperes

E *29* " : all lights each of *32* candle power requiring a total current of *10* Amperes

2 Mast head light with *1* lamp each of *32* candle power requiring a total current of *0.35* Amperes

2 Side light with *1* lamps each of *32* candle power requiring a total current of *0.35* Amperes

10 Cargo lights: of *5 of 1000 c.p.* & *5 of 32* 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 chartroom*

DESCRIPTION OF CABLES.

Main cable carrying *100* Amperes, comprised of *19* wires, each *2.14* mm S.W.G. diameter, *70* square mm total sectional area

Branch cables carrying *36* Amperes, comprised of *7* wires, each *1.41* mm S.W.G. diameter, *16* square mm total sectional area

Branch cables carrying *29* Amperes, comprised of *7* wires, each *1.35* mm S.W.G. diameter, *10* square mm total sectional area

Leads to lamps carrying *0.35* Amperes, comprised of *1* wires, each *1.38* mm S.W.G. diameter, *15* square mm total sectional area

Cargo light cables carrying *2* Amperes, comprised of *24* wires, each *0.45* mm S.W.G. diameter, *4* square mm total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Tinned copper wire, insulated with pure T.R. white vulcanised T.R., black vulcanised T.R., T.R. coated tape, lead covered and armoured; leads to lamps in cabins etc. lead covered, not armoured.

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 *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*

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 *in galvanised iron tubes.*



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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 *leadcovered and armoured*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *leadcovered and armoured*

What special protection has been provided for the cables near boiler casings *leadcovered and armoured*

What special protection has been provided for the cables in engine room *leadcovered and armoured*

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

How are cables carried through decks *brass or galvanised iron tubes*

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

If so, how are they protected *galvanised iron tubes*

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 *no*

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 switchboard in engine room*

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

Are any switches, fuses, 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 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 2000 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.

N. V. Van Rietschoten & Hooyens
Technische Afdeling

Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass

33 1/2

Distance between dynamo or electric motors and steering compass

36 "

The nearest cables to the compasses are as follows:—

A cable carrying	0, 1	Amperes	1	feet from standard compass	5	feet from steering compass
A cable carrying	0, 1	Amperes	5	feet from standard compass	1	feet from steering compass
A cable carrying		Amperes		feet from standard compass		feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power

The maximum deviation due to electric currents, etc., was found to be degrees on course in the case of the standard compass and degrees on course in the case of the steering compass.

SCHEEPSWERF VOORHEEN JAN SMIT GZ.

Builder's Signature. Date

GENERAL REMARKS.

This installation has been fitted in accordance with the Rules, was found in a good working condition when tried and merits in my opinion the Committee's approval

It is submitted that

this vessel is eligible for

THE RECORD. Elec. Light.

2.4. 22/2/22.

J. J. Ochoa

Surveyor Lloyd's Register of Shipping.

Committee's Minute