

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 8214^a

Port of Rotterdam Date of First Survey 28 October Date of Last Survey 19 December No. of Visits 5
 No. in on the Iron or Steel S.S. "Midrecht" Port belonging to Rotterdam
 Reg. Book Built at Rotterdam By whom Roos. Droogdok Hf. When built 1912
 Owners N. v. S.S. "Midrecht" Owners' Address Rotterdam
 Yard No. 53 Electric Light Installation fitted by A. de Groot When fitted Aug.-Nov. 1912

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Dynamo Compound wound protected. Engine vertical, single cylinder, enclosed forced lubricated, suitable for Sup. heated steam 322° Cels. and 100 lbs pressure

Capacity of Dynamo 70 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 syst.

Position of Main Switch Board near dynamo having switches to groups 4 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each without switches.

Fore castle, Chart room, Saloon, Engine room.

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 70 arranged in the following groups:—

A Fore castle 12 lights each of 4 of 16, 8 of 32 candle power requiring a total current of 10 Amperes

B Chart room 12 lights each of 4 of 16, 5 of 32 candle power requiring a total current of 7.5 Amperes

C Saloon 20 lights each of 9 of 16, 11 of 32 candle power requiring a total current of 15.5 Amperes

D Eng. room 20 lights each of 10 of 32, 2 of 16 candle power requiring a total current of 19 Amperes

E lights each of candle power requiring a total current of Amperes

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

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

2 Cargo lights of 6 x 16 candle power, whether incandescent or arc lights

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

Where are the switches controlling the masthead and side lights placed in Chart room.

DESCRIPTION OF CABLES.

Main cable carrying 62 Amperes, comprised of 19 wires, each 15 L.S.G. diameter, 0.07732 square inches total sectional area

Branch cables carrying 19 Amperes, comprised of 7 wires, each 15 L.S.G. diameter, 0.02040 square inches total sectional area

Branch cables carrying 12 Amperes, comprised of 7 wires, each 10 L.S.G. diameter, 0.01267 square inches total sectional area

Leads to lamps carrying 1 Amperes, comprised of 1 wires, each 17 L.S.G. diameter, 0.0025 square inches total sectional area

Cargo light cables carrying 3 Amperes, comprised of 33 wires, each 30 L.S.G. diameter, 0.003906 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Vulcanised rubber insulation, lead covered,
in screwed galvanised tube

Joints in cables, how made, insulated, and protected

No joints.

Are all the joints of cables thoroughly soldered, resin only having been used as a flux — 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 None

How are the cables led through the ship, and how protected Main cables and wires in Engine room and on deck

protected by galvanised iron tubes, in pump room lead covered in screwed iron tube

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 *screwed galvanised tube*

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

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

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

How are cables carried through beams *in iron tube* through bulkheads, &c. *water-tight stuff, same*

How are cables carried through decks *also in screwed galvanised tube*

Are any cables run through coal bunkers *No* 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 *yes, 4 lamps*

If so, how are the lamp fittings and cable terminals specially protected *Bull eye ornaments with wire guard and iron protecting cover*

Where are the main switches and cut outs for these lights fitted *in Engineer room*

If in the spaces, how are they specially protected *None*

Are any switches or cut outs fitted in bunkers *None*

Cargo light cables, whether portable or permanently fixed *portable* How fixed *water-tight plugs*

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 *yes, one voltmeter* supplied with a voltmeter and *one amp. meter* an amperemeter, fixed *on main switch 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 *yes*

Are any switches, cut outs, or joints of cables fitted in the pump room or companion *None*

How are the lamps specially protected in places liable to the accumulation of vapour or gas *None. In pump room air tight fittings of thick glass.*

The copper used is guaranteed to have a conductivity of *90* per cent. that of pure copper.

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.

A. de Hoop

Electrical Engineers

Date *Dec. 3^d 1912*

COMPASSES.

Distance between dynamo or electric motors and standard compass *121 feet*

Distance between dynamo or electric motors and steering compass *120 "*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>10</i>	<i>10</i>	<i>25</i>	
<i>7.5</i>	<i>13</i>	<i>16</i>	
<i>2</i>	<i>5</i>	<i>6</i>	

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 *Nil* course in the case of the standard compass and *Nil* degrees on *Nil* course in the case of the steering compass.

Builder's Signature.

Date *Dec. 3^d 1912*

GENERAL REMARKS. *The installation has been fitted in accordance with the Rules, worked satisfactorily 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. W. D. 27/12/12 Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute *TUE. DEC. 31. 1912*



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