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REPORT ON ELECTRIC LIGHTING INSTALLATION. No.

Port of Rotterdam Date of First Survey 24-11-14 Date of Last Survey 22-5-15 No. of Visits 3
 No. in on the Iron or Steel screw Steamer Karendberg Port belonging to Amsterdam
 Reg. Book Built at Capelle Schip (Holland) By whom A. Vrijk & Zonen When built 1914-15
 Owners Stoombootmaatschappij Th. M. G. J. Hilgersberg Owners' Address Amsterdam
 Card No. Electric Light Installation fitted by W. N. Hoos & Co When fitted 1915

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Steamdynamo (direct current)
pressure 100 Lbs 425 rev.
 Capacity of Dynamo 30 Amperes at 110 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Engine-room Whether single or double wire system is used double
 Position of Main Switch Board Engine-room near steamdynamo having switches to groups 13 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each one in ~~playing room~~ ^{captains room} with 7 groups and
one in ~~people lodges~~ ^{in crew space}, 2 -
 If fuses are fitted on main switch board to the cables of main circuit 2 double and on each auxiliary switch board to the cables of auxiliary circuits 9 double and at each position where a cable is branched or reduced in size no and to each lamp circuit no
 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 silver and constructed to fuse at an excess of 100 per cent over the normal current
 Are all fuses fitted in easily accessible positions Yes screw system 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 not use
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases Porcelain and Marble
 Total number of lights provided for 68 lights & 21 plugs arranged in the following groups:—
 A Engine-room 50 lights each of 32 candle power requiring a total current of 14½ Amperes
 B Captains room 41 lights each of 32 candle power requiring a total current of 11.9 Amperes
 C People spaces 19 lights each of 32 candle power requiring a total current of 5½ Amperes
 D lights each of 32 candle power requiring a total current of Amperes
 E lights each of 32 candle power requiring a total current of Amperes
 2 Mast head light with lamps each of 32 candle power requiring a total current of Amperes
 2 Side light with lamps each of 32 candle power requiring a total current of Amperes
 4 Cargo lights of each 5 lights of 32 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 Playing room Captains room

DESCRIPTION OF CABLES.

Main cable carrying max. 30 Amperes, comprised of 7 wires, each 7/17 S.W.G. diameter, 0.017 square inches total sectional area
 Branch cables carrying 11.9 Amperes, comprised of 7 wires, each 7/17 S.W.G. diameter, 0.017 square inches total sectional area
 Branch cables carrying 5.5 Amperes, comprised of 7 wires, each 7/19 S.W.G. diameter, 0.0086 square inches total sectional area
 Leads to lamps carrying 2.9 Amperes, comprised of 1 wires, each 17 S.W.G. diameter, 0.0025 square inches total sectional area
 Cargo light cables carrying 1.45 Amperes, comprised of 2 x 30 wires, each flexible S.W.G. diameter, 0.0025 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Steel screwed conduits and in cabins
lead covered wire

Joints in cables, how made, insulated, and protected in steel boxes

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 noHow are the cables led through the ship, and how protected into steel screwed conduits

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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 steel screwed conduits

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat steel screwed conduits

What special protection has been provided for the cables near boiler casings steel screwed conduits

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

How are cables carried through beams by steel screwed conduits through bulkheads, &c. by steel screwed conduits with flanges

How are cables carried through decks watertight by flanges

Are any cables run through coal bunkers none or cargo spaces yes or spaces which may be used for carrying cargo, stores, or baggage yes

If so, how are they protected by steel screwed conduits

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 by 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 —

Is the installation supplied with a voltmeter Yes, and with an amperemeter Yes, fixed main switch 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 —

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 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.

M. J. J. J. J.

Electrical Engineers

Date March 16th 1915

COMPASSES.

Distance between dynamo or electric motors and standard compass 90 ft

Distance between dynamo or electric motors and steering compass 85 ft

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>9</u>	<u>4</u>	<u>5</u>	<u>5</u>
<u>2</u>	<u>4</u>	<u>5</u>	<u>5</u>
<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 the standard compass and nil degrees on — course in the case of the steering compass.

A. W. J. J. J.

Builder's Signature.

Date 19th March 1915

GENERAL REMARKS.

This installation has been fitted in accordance with the rules and found working satisfactory when tried, I am of opinion that same merits the Committee's approval

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

J. W. D. 1/4/15

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

Committee's Minute WED. APR -7 1915