Rpt. 13.

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# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 6959.C

Port of Amsterdam Date of First Survey 19 febr Date of Last Survey 17 April No. of Visits 7

No. in Reg. Book 35 in Supp. on the ~~Iron~~ Steel S.S. Otis Oltrase Port belonging to Rotterdam

Built at Zalt Bommel By whom J. Meijers Shipbuilding Co When built 1916.

Owners Koudijs & Pieters Owners' Address Rotterdam

Yard No. 427. Electric Light Installation fitted by Groeneveld, van der Poll & Co When fitted 1916.

**DESCRIPTION OF DYNAMO, ENGINE, ETC.**

Direct coupled dynamo

Capacity of Dynamo 35 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.

Position of Main Switch Board in Engine room having switches to groups 4. of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each One destribution Box in Engine room, One in Chartroom, One in Engine room Casing and one in midship deckhouse.

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

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 Yes.

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

Total number of lights provided for 65 lamps 13 hold lamps 75 lights Each arranged in the following groups :—

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| A | 14 | lights each of | 25 | candle power requiring a total current of | 4 | Amperes |
| B | 26 | lights each of | 25 | candle power requiring a total current of | 6 | Amperes |
| C | 15 / 15 | lights each of | 25 / 16 | candle power requiring a total current of | 4 / 2.5 | Amperes |
| D | 4 / 4 | lights each of | 32 / 8 | candle power requiring a total current of | 4 / 0.5 | Amperes |
| E | | lights each of | | candle power requiring a total current of | | Amperes |
| two | Mast head light with One | lamps each of | 32 | candle power requiring a total current of | 2 | Amperes |
| two | Side light with One | lamps each of | 32 | candle power requiring a total current of | 2 | Amperes |
| three | Cargo 5 lights of | | 80 | candle power Each whether incandescent ~~or are lights~~ | Yes. | |

If arc lights, what protection is provided against fire, sparks, &c. no are lights

Where are the switches controlling the masthead and side lights placed in Chartroom, with automatic indicator Controlling masts & side lights

**DESCRIPTION OF CABLES.**

Main cable carrying 35 Amperes, comprised of 7 wires, each 2.16 m/m S.W.G. diameter, 25 m/m² square inches total sectional area

Branch cables carrying 4 / 6 Amperes, comprised of 1 wires, each 2.75 S.W.G. diameter, 6 m/m² square inches total sectional area

Branch cables carrying 4.5 / 6.5 Amperes, comprised of 1 wires, each 2.75 S.W.G. diameter, 6 m/m² square inches total sectional area

Leads to lamps carrying 1.23 Amperes, comprised of 1 wires, each 1.40 S.W.G. diameter, 1½ / 2½ m/m² square inches total sectional area

Cargo light cables carrying 0.70 Amperes, comprised of 1 wires, each 1.18 S.W.G. diameter, 1½ m/m² square inches total sectional area

**DESCRIPTION OF INSULATION, PROTECTION, ETC.**

Tinned Copperwire, insulated pure and vulcanised India Rubber, Coated tape, the whole vulcanised together, galvanised iron watertight tubes in holds & W deck, Armoured cables elsewhere

Joints in cables, how made, insulated, and protected joints made in watertight junction boxes, soldered and all in accessible positions.

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 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 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* watertight tubes

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

*What special protection has been provided for the cables near boiler casings* Armoured cables and tubes.

*What special protection has been provided for the cables in engine room* Armoured cable.

*How are cables carried through beams* — *through bulkheads, &c.* —

*How are cables carried through decks* by watertight plug screws.

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

*If so, how are they protected* watertight tubes.

*Are any lamps fitted in* ~~coal bunkers~~ *or spaces which may at times be used for cargo,* ~~coals~~, *or baggage* Yes.

*If so, how are the lamp fittings and cable terminals specially protected* with W.T bronz frames & glasses.

*Where are the main switches and fuses for these lights fitted* on auxilliary switch board

*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* with 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* On 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 1000 megohms per statute mile at 60° Farhenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than ~~500~~ 4000 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.**

Siemens Bros & Co Ltd. *Electrical Engineers* *Date* April 1916

**COMPASSES.**

*Distance between dynamo or electric motors and standard compass* 70 feet

*Distance between dynamo or electric motors and steering compass* 60 feet

*The nearest cables to the compasses are as follows:—*

| | | | | | |
|---|---|---|---|---|---|
| *A cable carrying* 5 | *Amperes* 17 | *feet from standard compass* 13 | *feet from steering compass* |
| *A cable carrying* 0,3 | *Amperes* for | ~~*feet from*~~ *standard compass* for | ~~*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.*

J. MEYER'S SCHEEPSBOUWMAATSCHAPPIJ

J. Meijer *Builder's Signature.* *Date* April 1916.

**GENERAL REMARKS.**

The Electric light installation in this vessel has been fitted in a satisfactory manner and will require to be further Examined during working Condition. The vessel left the Builders for Rotterdam to Complete Engine and Boilers. Society's Rotterdam district Surveyors have been advised by letter of 19 April 1916.

This vessel is eligible for THE RECORD Elec. light. J.W.D. 31/5/16

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

*Committee's Minute* FRI. JUN.-2.1916

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

Im[illegible]14.—Transfer.