

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 4207.

Port of Göteborg Date of First Survey 29th April Date of Last Survey 5th June 1919 No. of Visits 4
 No. in Reg. Book on the Iron or Steel S.S. "Widia" Port belonging to Göteborg
 Built at Göteborg By whom Lindholmens Verkstads AB When built 1919
 Owners Rederiaktiebolaget Transatlantic Owners' Address Göteborg
 Yard No. 435 Electric Light Installation fitted by Alliedbolaget Elektromarin When fitted 1919

DESCRIPTION OF DYNAMO, ENGINE ETC.

Steam turbine generator.

Capacity of Dynamo 90 Amperes at 100 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 engine room having switches to groups 5 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each 1 aft, 2 amidships and 1 in way of crew space.

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

Total number of lights provided for 159 arranged in the following groups:—

Group	Number of Lights	Wattage / Candle Power	Total Current (Amperes)
A	26	lights each of 30 watt, about 25 candle power	7.1
B	3	lights each of 25 " " 20 candle power	0.7
C	34	lights each of 25 " " 20 candle power	7.7
D	34	lights each of 25 " " 20 candle power	7.7
E	17	lights each of 25 " " 20 candle power	3.9
2 Mast head lights	2	each of 25 candle power	0.5
2 Side lights	2	each of 25 candle power	0.5
8 Cargo lights	8	5 x 25 candle power	0.25

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

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

DESCRIPTION OF CABLES.

Number of Cables	Capacity (Amperes)	Wires per Cable	S.W.G. Diameter	Area per Wire (sq in)	Total Sectional Area (sq in)
Main cable carrying	90	7	50	0.0015	0.0105
Branch cables carrying	6	7	4	0.0015	0.0090
Branch cables carrying	3	7	2.5	0.0015	0.0045
Leads to lamps carrying	2	7	1.5	0.0015	0.0030
Cargo light cables carrying	2	7	1.5	0.0015	0.0030

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cables are insulated by pure, vulcanized rubber, lead armoured, covered with paper and rubber tape. Protected by iron wire, coated with red lead.

Joints in cables, how made, insulated, and protected Twisted, insulated, by vulcanized rubber and rubber tape, protected by watertight iron 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 No

How are the cables led through the ship, and how protected Armoured cables secured to the under side of the deck in way of beam knees.

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 *Armoured cables, and steel tubes where required.*

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

What special protection has been provided for the cables near boiler casings *Do. do.*

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

How are cables carried through beams *Lead covered* through bulkheads, etc. *Watertight glands*

How are cables carried through decks *in steel tubes with watertight glands.*

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

If so, how are they protected *Armoured cables and steel tubes where required.*

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

If so, how are the lamp fittings and cable terminals specially protected *Watertight mountings*

Where are the main switches and fuses for these lights fitted *in engine room*

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 *Terminals securely protected*

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° 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.

Chilicolago & Co. Romanina

COMPASSES.

Distance between dynamo or electric motor's and standard compass *Behind Port* Electrical Engineers Date *4/2 1919*

Distance between dynamo or electric motor's and steering compass *Engine room to flying bridge*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
A cable carrying	Amperes	feet from standard compass	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.

GENERAL REMARKS.

This electric light installation has been fitted onboard under my inspection and has been tested and found satisfactory. All rule requirements have been complied with.

It is submitted that this vessel is eligible for THE RECORD. ELEC. LIGHT

Fee No. 50.00. Applied for 9/7/19.

Committee's Minute _____ TUE. 22 JUL. 1919 _____ Surveyor to Lloyd's Register of Shipping. *Whilow*

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

