

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 11412

Port of Antwerp Date of First Survey 27.9.20 Date of Last Survey 24.11.20 No. of Visits 5
 No. in on the Steel S/S Grande "GIRONDE" Port belonging to Antwerp
 Reg. Book 19149 Built at Hoboken (Antwerp) By whom Antwerp Engineering Co. When built 1920
 Owners Armement Deppe Owners' Address Antwerp
 Yard No. 75 Electric Light Installation fitted by Etablissements Belges Campbell + Sherwood When fitted 1920

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Open type single cylinder engine fitted with crankshaft governor direct coupled to open type compound wound 4 pole dynamo.

Capacity of Dynamo 50 Amperes at 100 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed on platform in eng. room. Whether single or double wire system is used double

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

Positions of auxiliary switch boards and numbers of switches on each Engine room 5 Engineers alleyway 2

Chart room 5, saloon alleyway 4.

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 30% 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 80 arranged in the following groups:—

A	<u>Wireless</u>	lights each of		candle power requiring a total current of	<u>10</u>	Amperes
B	<u>20</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>5</u>	Amperes
C	<u>10</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>3</u>	Amperes
D	<u>14</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>7</u>	Amperes
E	<u>10</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>5</u>	Amperes
<u>2</u>	Mast head light with	<u>1</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>2</u>	Amperes
<u>2</u>	Side light with	<u>1</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>2</u>	Amperes
<u>2</u>	Cargo lights of	<u>125</u>		candle power, whether incandescent or arc lights	<u>incandescent</u>	

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

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

DESCRIPTION OF CABLES.

Main cable carrying	<u>50</u> Amperes, comprised of	<u>19</u> wires, each	<u>.052</u> S.W.G. diameter,	<u>0.03960</u> square inches total sectional area
Branch cables carrying	<u>20</u> Amperes, comprised of	<u>7</u> wires, each	<u>.036</u> S.W.G. diameter,	<u>0.00701</u> square inches total sectional area
Branch cables carrying	<u>✓</u> Amperes, comprised of	<u>✓</u> wires, each	<u>✓</u> S.W.G. diameter,	<u>✓</u> square inches total sectional area
Leads to lamps carrying	<u>4</u> Amperes, comprised of	<u>3</u> wires, each	<u>.029</u> S.W.G. diameter,	<u>0.0020</u> square inches total sectional area
Cargo light cables carrying	<u>2.5</u> Amperes, comprised of	<u>40</u> wires, each	<u>0.0076</u> S.W.G. diameter,	<u>0.0017</u> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Armoured and lead covered cables in Engine room and storeroom. Galvanized steel piping and vulcanized cable through holds etc. Red covered wire in cabins and saloons

Joints in cables, how made, insulated, and protected none

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances none 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 none

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 Steel pipes.



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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 pipes and lead covered cables*

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

What special protection has been provided for the cables near boiler casings *have been kept clear*

What special protection has been provided for the cables in engine room *Unmoused and lead covered cables*

How are cables carried through beams *through lead bushes* through bulkheads, &c. *W. T. Hands*

How are cables carried through decks *through deck pipes*

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 *steel pipes*

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 *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 bulkhead*

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.

CAMPBELL & FISHERWOOD
Société Anonyme
Electrical Engineers
Date *Nov 27th 1920*

COMPASSES. *Louis E. Mandel*

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

Distance between dynamo or electric motors and steering compass *73 ft*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>1/2</i>	<i>3</i>	<i>6</i>	
<i>✓</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>
<i>✓</i>	<i>✓</i>	<i>✓</i>	<i>✓</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. *W. G. Morgan* Date *30 Nov 1920*

THE ANTWERP ENGINEERING COMPANY SOC. AN
General Manager

GENERAL REMARKS. *The workmanship & materials are good. The Installation has been fitted on board, & when tried under full working conditions, was found satisfactory. The record of "Electric Light," may, in my opinion, be made in The Register Book, in the case of this vessel.*

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

H. L. Pilditch.
Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 17 DEC. 1920*

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.