

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 10091

Port of Antwerp Date of First Survey 13th Sept/12 Date of Last Survey 17th Jan/13 No. of Visits Eight
 No. in Reg. Book 477 on the Iron Steel Twin S. S. "Alberville" Port belonging to Antwerp
 Built at Hoboken By whom J. A. John Crokerill When built 1912
 Owners Comp. Belge Maritime du Congo Owners' Address 13, Canal des Recolets, Antwerp.
 Yard No. 524 Electric Light Installation fitted by H. E. Robertson & Co., Glasgow When fitted 1912.

DESCRIPTION OF DYNAMO, ENGINE, ETC. Makers: Allen Sons & Co. Ltd., Bedford, England.
Two single crank, two cylinders, tandem engines, each having cylinders 8" x 10" diam. by 5" stroke, running at 500 rev. per minute when supplied with steam at 120 lbs. per sq. inch.
 Capacity of Dynamo each 290 Amperes at 100 Volts, whether continuous or alternating current continuous
 Where are Dynamoes fixed In engine room Whether single or double wire system is used single, except near compasses.
 Position of Main Switch Board Engine room having switches to groups A, B, C, D, E, F, G, H, I of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each One in engine room aft, 6 switches - One do. fore, 5 switches
One in 1st cl. saloon, 17 switches - one in 2nd cl. saloon, 12 switches - one in 1st cl. dining room, 15 switches, one on bridge deck, 9 switches.
 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 no reduction 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 pure copper and constructed to fuse at an excess of hundred 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 (in the boxes)
 Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases yes
 Total number of lights provided for 700 arranged in the following groups:—

A	<u>92</u>	lights each of (<u>metallia filament</u>) <u>25</u> candle power requiring a total current of	<u>36</u>	Amperes
B	<u>136</u>	" " " " " " " " " " " "	<u>54</u>	Amperes
BC	<u>119</u>	lights each of " " " " " " " " " " " "	<u>47</u>	Amperes
D	<u>92</u>	lights each of " " " " " " " " " " " "	<u>36</u>	Amperes
DE	<u>89</u>	" " " " " " " " " " " "	<u>35</u>	Amperes
F	<u>83</u>	lights each of " " " " " " " " " " " "	<u>33</u>	Amperes
FG	<u>55</u>	" " " " " " " " " " " "	<u>22</u>	Amperes
H	<u>Magnoni</u>	lights each of " " " " " " " " " " " "	<u>63</u>	Amperes
EI	<u>Sand</u>	" " " " " " " " " " " "	<u>63</u>	Amperes
J	<u>2</u>	Mast head lights with <u>1</u> lamp each of <u>32</u> candle power requiring a total current of	<u>1</u>	Amperes
	<u>2</u>	Side lights with <u>1</u> lamp each of <u>32</u> candle power requiring a total current of	<u>1</u>	Amperes
	<u>4</u>	Cargo lights of <u>8</u> lamps each of <u>16</u> candle power, whether incandescent or arc lights <u>incandescent, carbon fil.</u>	<u>each 25 Amperes</u>	

 If arc lights, what protection is provided against fire, sparks, &c. glass globes, wire netting.

Where are the switches controlling the masthead and side lights placed In wheelhouse, on navigating bridge.

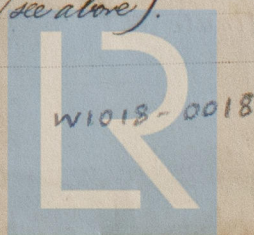
DESCRIPTION OF CABLES.

Main cable carrying 290 Amperes, comprised of 37 wires, each no 12 L.S.G. diameter, 0.2165 square inches total sectional area
 Branch cables carrying 41 Amperes, comprised of 19 wires, each " 15 L.S.G. diameter, 0.0765 square inches total sectional area
 Branch cables carrying 13 Amperes, comprised of 7 wires, each " 15 L.S.G. diameter, 0.0432 square inches total sectional area
 Leads to lamps carrying 28 Amperes, comprised of 1 wires, each " 16 L.S.G. diameter, 0.0032 square inches total sectional area
 Cargo light cables carrying 16 Amperes, comprised of 7 wires, each " 16 L.S.G. diameter, square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

All cables of 600 megohm grade "Association class". The wires throughout the principal rooms and accommodation are vulcanized & braided, run in dry wood casings with screwed removable cover. Wires in engine room, stokehold & galley are lead covered, sewed, and armoured and clipped. Wires on open decks & masts laid in galvanized iron tubes.
 Joints in cables, how made, insulated, and protected soldered - tape & varnish - wood casing

Are all the joints of cables thoroughly soldered, resin only having been used as a flux 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 casings - armoured or tubes (see above).



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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 *lead covered or iron tubes*

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

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

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

How are cables carried through beams *fibre bushes* through bulkheads, &c. *watertight glands*

How are cables carried through decks *watertight deck pipes*

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

If so, how are they protected *casings in baggage rooms and store rooms*

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

If so, how are the lamp fittings and cable terminals specially protected *Placed between the beams, and guards fitted.*

Where are the main switches and cut outs for these lights fitted *On the auxiliary switch boards.*

If in the spaces, how are they specially protected *none fitted in the spaces.*

Are any switches or cut outs 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 *sole plate of dynamo.*

How are the returns from the lamps connected to the hull *copper plate & screw into the nearest beam or in steel deck*

Are all the joints with the hull in accessible positions *yes*

The installation is _____ supplied with a voltmeter and *two* or 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

Are any switches, cut outs, 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 *one hundred* per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than *six hundred (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.

For H. T. Robertson & Co. Glasgow J. R. Fountain Electrical Engineers

Date *17th January 1913.*

COMPASSES.

Distance between dynamo or electric motors and standard compass *148 ft. from dynamo - 12' from 12" fan (capt. room)*

Distance between dynamo or electric motors and steering compass *144 ft. " " - 6' " "*

The nearest cables to the compasses are as follows:—

A cable carrying <i>1/2</i>	Amperes	<i>3</i>	feet from standard compass	<i>3</i>	feet from steering compass
A cable carrying <i>2</i>	Amperes	<i>6</i>	feet from standard compass	<i>6</i>	feet from steering compass
A cable carrying <i>✓</i>	Amperes	<i>✓</i>	feet from standard compass	<i>✓</i>	feet from steering compass

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

James D. Fountain Builder's Signature. Date *21st January 1913*

GENERAL REMARKS.

The materials & fittings used are good workmanship is satisfactory and the installation generally is in accordance with Rule requirements. The record of "Electric Light" may, in our opinion, be now made in the Register Book in the case of this vessel.

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

W. R. Edgar & W. J. Wilson

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

Committee's Minute

TUE. FEB. 11. 1913

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.