

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 13595

Port of Hamburg Date of First Survey 18th Aug. Date of Last Survey 25th Aug. No. of Visits 5
 No. in Reg. Book 939 on the Iron on Steel S.S. "Amcoba" Port belonging to London
 Built at Dumbarton By whom A. Mc. Millan & Son Ltd. When built 1901
 Owners African S.S. Co. (Glasgow, Dumbarton & Co. Ltd. Agents) Owners' Address London
 Yard No. — Electric Light Installation fitted by Siemens Schuckert Werke When fitted 1913

DESCRIPTION OF DYNAMO, ENGINE, ETC.

1 Steam Engine coupled direct to an Siemens Schuckert Dynamo running at 300 rev. per minute.

Capacity of Dynamo 65 Amperes at 110 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Eng. Room Whether single or double wire system is used single

Position of Main Switch Board Eng. Room having switches to groups A, B, C, D & E. of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each 1 in Eng. Room with 7 switches, 1 in Steering house with 4 switches, 1 in Pantry with 10 switches, 1 under Forecastle with 3 switches, & 1 in Chart house with 6 switches.

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-oxidisable metal yes and constructed to fuse at an excess of 20 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 93 arranged in the following groups:—

A Eng. & Boiler Space 24 lights each of <u>16</u>	candle power requiring a total current of <u>12</u>	Amperes
B Midship & aft 20 lights each of <u>16</u>	candle power requiring a total current of <u>10</u>	Amperes
C " " Fore. 34 lights each of <u>16</u>	candle power requiring a total current of <u>17</u>	Amperes
D Forecastle 9 lights each of <u>16</u>	candle power requiring a total current of <u>4.5</u>	Amperes
E Chart house 4 lights each of <u>25</u>	candle power requiring a total current of <u>2.8</u>	Amperes
incl. 2 Mast head light with 1 lamps each of <u>25</u>	candle power requiring a total current of <u>—</u>	Amperes
E 2 Side light with 1 lamps each of <u>25</u>	candle power requiring a total current of <u>—</u>	Amperes
2 Cargo lights of each 8 Amp. & 1000	candle power, whether incandescent or arc lights <u>16</u>	"

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

2 cluster lamps of 5 lights each included in C. and 2 in B.

Where are the switches controlling the masthead and side lights placed Chart house

DESCRIPTION OF CABLES.

Main cable carrying <u>65</u> Amperes, comprised of <u>7</u> wires, each <u>—</u> S.W.G. diameter, <u>35</u> square inches total sectional area
Branch cables carrying <u>36</u> Amperes, comprised of <u>7</u> wires, each <u>—</u> S.W.G. diameter, <u>16</u> square inches total sectional area
Branch cables carrying <u>19</u> Amperes, comprised of <u>7</u> wires, each <u>—</u> S.W.G. diameter, <u>6</u> square inches total sectional area
Leads to lamps carrying <u>15</u> Amperes, comprised of <u>1</u> wires, each <u>—</u> S.W.G. diameter, <u>1.5</u> square inches total sectional area
Cargo light cables carrying <u>8</u> Amperes, comprised of <u>1</u> wires, each <u>—</u> S.W.G. diameter, <u>2.5</u> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Main and Branch cables copper tinned, coated with Para conduction, coated with impregnated jute tape, lead covered, spun with impregnated jute band double iron bound and jute spun & asphalted.
Circuit & Lamp leads: 6 copper tinned coated with conduction & rubber & spun with tape insulation.

Joints in cables, how made, insulated, and protected Soldered and covered with conduction and tape for lamp circuits, and leads, metallic screw joints in water tight boxes on incombustible bases for main and branch cables.

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 Main and Branch cables carried open except where they are exposed to moisture, where they are laid in iron boxes. Circuit & Lamp leads are protected by wooden battens.

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 Iron bound leads covered cables, protected by iron casings

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Iron bound cables

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 do do

How are cables carried through beams hard wood, burlies through bulkheads, &c. screwed brass bushes

How are cables carried through decks Iron galvanized stand pipes 12" filled with non-conducting asphalt

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

If so, how are they protected —

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

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 by brass screw and washer

How are the returns from the lamps connected to the hull by brass screws and washers

Are all the joints with the hull in accessible positions yes

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 50 million ^{units} ~~megohms~~ ^{kilometer} 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.

HANSEATISCHE
SIEMENS-SCHUCKERT WERKE

Electrical Engineers

Date 20th Sept. 1913

COMPASSES.

Distance between dynamo or electric motors and standard compass 60 ft.

Distance between dynamo or electric motors and steering compass 58 ft.

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
1	10	12	—
—	—	—	—
—	—	—	—

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 imperceptible degrees on — course in the case of the steering compass.

Builder's Signature. Date —

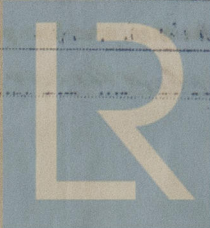
GENERAL REMARKS. The electric light installation on board of this vessel is in my opinion fitted in accordance with the Society's Rules and eligible to be recorded "Elec. Light" in the Register Book.

It is submitted that
this vessel is eligible for

THE RECORD. Elec. light

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

Committee's Minute



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Foundation