

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 or Steel St. Lr. "Ancobra" Port belonging to London
 Built at Gumbarton By whom A. McWilliam & Son Ltd When built 1904
 Owners African S. S. Co. (Elder Dempster & Co. Ltd. Lgrs.) Owners' Address London
 Yard No. — Electric Light Installation fitted by Siemens Schuckert Werke When fitted 1913

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Steam Engine coupled direct to a Siemens Schuckert Dynamo running at 200 rev. per min.

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 Eng. Room with 1 switch, 1 Steering house with 4 switches, 1 Pantry with 10 switches, & 1 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 yes

Are the fuses of non-oxidizable metal yes and constructed to fuse at an excess of 20 percent 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 95 arranged in the following groups:—

A Eng. Room 24 lights each of 16 candle power requiring a total current of 11 Amperes

B Midship 12 lights each of 16 candle power requiring a total current of 5.5 Amperes

C " Forward 4 lights each of 16 candle power requiring a total current of 13.5 Amperes

D Forecastle 30 lights each of 16 candle power requiring a total current of — Amperes

E Chart house 6 lights each of 2 off 16-4 off 25 candle power requiring a total current of 3 Amperes

2 Mast head light with 1 lamp each of 25 candle power requiring a total current of 1 Amperes

2 Side light with 1 lamp each of 25 candle power requiring a total current of 1 Amperes

4 cluster lamps 5" candle power, whether incandescent or arc lights 10 Amperes

2 Cargo lights of 8 candle power, whether incandescent or arc lights 8 Amperes

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

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

DESCRIPTION OF CABLES.

Main cable carrying 95 Amperes, comprised of 7 wires, each 2.5 S.W.G. diameter, 25 square inches total sectional area

Branch cables carrying 25 Amperes, comprised of 7 wires, each 1.8 S.W.G. diameter, 14 square inches total sectional area

Branch cables carrying 60 Amperes, comprised of 7 wires, each 1.7 S.W.G. diameter, 16 square inches total sectional area

Leads to lamps carrying 15 Amperes, comprised of 4 wires, each 1.5 S.W.G. diameter, 1.5 square inches total sectional area

Cargo light cables carrying 8 Amperes, comprised of 1 wires, each 4 S.W.G. diameter, 4 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Main & branch cables copper tinned coated with cotton lute, coated with impregnated jute tape, lead covered spun with impregnated jute band, double iron bound and jute spun and asphalted, circuits & lamp leads: copper tinned coated with cotton lute & rubber & spun with tape insulation.

Joints in cables, how made, insulated, and protected Soldered and covered with cotton lute 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 & branch cables carried open except where they are exposed to moisture, where they are led in iron boxes. Circuits & lamp leads are protected by wood 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 bushes through bulkheads, &c. screwed brass bushes

How are cables carried through decks Iron galvanized stand pipes 1 1/2" light fitted with wire conducting asphalt

Are any cables run through coal bunkers yes 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 —

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 to 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 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.

**HANSEATISCHE
SIEMENS-SCHÜCKERT WERKE**
Gesellschaft mit beschränkter Haftung.

Electrical Engineers

Date —

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	
2	—	—	
3	—	—	

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 nil 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.

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

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.