

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 232

Port of Bremen Date of First Survey 17th Feb 1913 Date of Last Survey 26th March 1913 No. of Visits 6
 No. in Reg. Book Sup 102 on the Iron or Steel 4 Mast Fr ALDA Port belonging to Bremen
 Built at Geestmünde By whom Joh. F. Tackenberg & Co. When built 1913
 Owners Noland Linie Akt. Ges. Owners' Address Bremen
 Yard No. 252 Electric Light Installation fitted by Mauratische Siemens-Schuckert Werke When fitted 1913

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One compound-wound-dynamo type Siemens Schuckert directly coupled to one compound steam engine

Capacity of Dynamo 150 Amperes at 110 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed in the engine room Whether single or double wire system is used double wire
 Position of Main Switch Board in the engine room having switches to groups 4 for groups of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each one aft with 4 switches, one midship with 10 switches, one in the engine room with 10 switches, one foreship with 6 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 yes and to each lamp circuit yes
 If cessel 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 yes and constructed to fuse at an excess of 100 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, on fuse plugs
 Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases yes, on porcelain & marble.

Total number of lights provided for 234 arranged in the following groups:—

| | | | | | |
|--|-------------------|----|--|-----------|---------|
| A engine, boiler etc. | 29 lights each of | 10 | candle power requiring a total current of | 20 | Amperes |
| B aft | 23 lights each of | 16 | candle power requiring a total current of | 12.5 | Amperes |
| C midship | 49 lights each of | 10 | candle power requiring a total current of | 24.5 | Amperes |
| D mess room | 68 lights each of | 10 | candle power requiring a total current of | 34 | Amperes |
| E foreships | 37 lights each of | 10 | candle power requiring a total current of | 18.5 | Amperes |
| 2 Mast head light with 2 lamps each of | 25 | | candle power requiring a total current of | 1.6 | Amperes |
| 2 Side light with 2 lamps each of | 32 | | candle power requiring a total current of | 2.2 | Amperes |
| 2 Arc. Cargo lights of about 6000 | | | candle power, whether incandescent or arc lights | arc light | |

If arc lights, what protection is provided against fire, sparks, &c. glass globes, enclosed in wire with ashes trays.
 Where are the switches controlling the masthead and side lights placed in the chart-house

DESCRIPTION OF CABLES.

| | | | | | |
|-----------------------------|---------------------------|----------------|-----------------------|-------------------|----------------------|
| Main cable carrying | 150 Amperes, comprised of | 19 wires, each | 2.52 L.S.G. diameter, | 95 square inches | total sectional area |
| Branch cables carrying | 40 Amperes, comprised of | 19 wires, each | 1.53 L.S.G. diameter, | 35 square inches | total sectional area |
| Branch cables carrying | 35 Amperes, comprised of | 7 wires, each | 2.13 L.S.G. diameter, | 25 square inches | total sectional area |
| Leads to lamps carrying | 0.5 Amperes, comprised of | 1 wires, each | 1.38 L.S.G. diameter, | 1.5 square inches | total sectional area |
| Cargo light cables carrying | 8 Amperes, comprised of | 1 wires, each | 2.26 L.S.G. diameter, | 10 square inches | total sectional area |

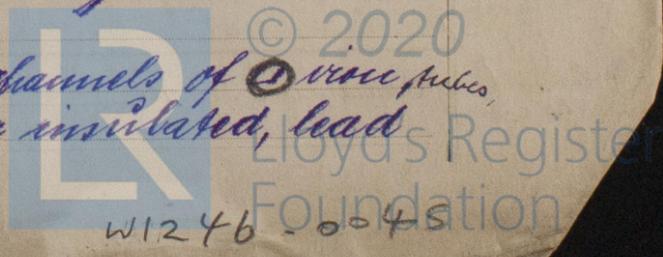
DESCRIPTION OF INSULATION, PROTECTION, ETC.

Main and branch cables are insulated by vulcanized rubber lead sheathed and double steel armed.

Joints in cables, how made, insulated, and protected in watertight boxes.

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 Cables are partly laid in channels of zinc pipes, partly fastened with screwed clips. All cables rubber insulated, lead covered and steel armed.



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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. cables are laid in iron.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat. They are covered by steel.

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

What special protection has been provided for the cables in engine room. do.

How are cables carried through beams iron pipes through bulkheads, &c. stuffing boxes

How are cables carried through decks iron pipes partly brass stuffing boxes.

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

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 cut outs for these lights fitted

If in the spaces, how are they specially protected

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

How are the returns from the lamps connected to the hull

Are all the joints with the hull in accessible positions

The installation is no supplied with a voltmeter and no an 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 98 per cent, that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 500 Siemens Units megohms per statute 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.

**HANSEATISCHE
SIEMENS-SCHUCKERTWERKE**
Gesellschaft mit beschränkter Haftung

Electrical Engineers

Date March 17th 1913

COMPASSES.

Distance between dynamo or electric motors and standard compass 110'-0

Distance between dynamo or electric motors and steering compass 100'-0

The nearest cables to the compasses are as follows:—

| | | | | | | |
|------------------|-----------|---------|-----------|----------------------------|-----------|----------------------------|
| A cable carrying | <u>95</u> | Amperes | <u>35</u> | feet from standard compass | <u>30</u> | feet from steering compass |
| A cable carrying | <u>25</u> | Amperes | <u>15</u> | feet from standard compass | <u>8</u> | feet from steering compass |
| A cable carrying | <u>8</u> | Amperes | <u>10</u> | feet from standard compass | <u>10</u> | 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 none degrees on any course in the case of the standard compass and none degrees on any course in the case of the steering compass.

JOH. C. TECKLENBORG A.-G.
Schiffswart und Maschinenfabrik

Builder's Signature. Date

GENERAL REMARKS.

This installation has been tried on a 6 hour trial trip and has been found to work well so that in my opinion the notation "Electric light" might be added to the vessels class in the Register Book.

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

J. W. D. 8/14/13 G. H. S. P. A. M.

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

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

