

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 14327

Port of HAMBURG Date of First Survey _____ Date of Last Survey _____ No. of Visits _____
 No. in Reg. Book on the Iron or Steel So. Sr. "LENNER" Port belonging to HAMBURG
 Built at Roslock By whom Art. Gen. "NEPTUN" When built 1915
 Owners The Shipping Controller (Goswick) Owners' Address LONDON
 Yard No. 344 Electric Light Installation fitted by The Guilders When fitted 1916

DESCRIPTION OF DYNAMO, ENGINE, ETC.

1 Compound Steam Engine coupled direct to a Siemens Schuckert Dynamo running at 500 revolutions per minute.
 Capacity of Dynamo 110 Amperes at 110 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Eng. Room Whether single or double wire system is used double
 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 Eng. Room with 14 switches 1 Steering house with 6 switches, 1 Saloon passage with 3 switches, 1 Forecabin with 3 switches, 1 Charthouse with 5 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-oxidizable metal yes and constructed to fuse at an excess of 25 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 187 arranged in the following groups:—

A	Eng. & Boiler Space	49 lights each of	16.	candle power requiring a total current of	22	Amperes
B	Midship & aft	52 lights each of	16.	candle power requiring a total current of	23	Amperes
C	Forew.	50 lights each of	16	candle power requiring a total current of	25	Amperes
D	Forecastle	20 lights each of	16.	candle power requiring a total current of	9	Amperes
E	Charthouse	5 lights each of	32	candle power requiring a total current of	4	Amperes
Incl. (2 Mast head light with 1 lamps each of		32		candle power requiring a total current of		Amperes
(2 Side light with 1 lamps each of		32		candle power requiring a total current of		Amperes
2 Cargo lights of		1000		candle power, whether incandescent or arc lights	20	

If arc lights, what protection is provided against fire, sparks, &c. Glass Globes
10 cluster lamps each 6 lights of 16 candle power incl. in B, C & D.
 Where are the switches controlling the masthead and side lights placed Charthouse.

DESCRIPTION OF CABLES.

Main cable carrying	<u>110</u> Amperes, comprised of	<u>19</u> wires, each	<u>1.83</u> S.W.G. diameter,	<u>50</u> square inches total sectional area
Branch cables carrying	<u>35</u> Amperes, comprised of	<u>19</u> wires, each	<u>1.58</u> S.W.G. diameter,	<u>35</u> square inches total sectional area
Branch cables carrying	<u>10</u> Amperes, comprised of	<u>7</u> wires, each	<u>1.7</u> S.W.G. diameter,	<u>10</u> square inches total sectional area
Leads to lamps carrying	<u>1</u> Amperes, comprised of	<u>1</u> wires, each	<u>1.5</u> S.W.G. diameter,	<u>1.5</u> square inches total sectional area
Cargo light cables carrying	<u>10</u> Amperes, comprised of	<u>1</u> wires, each	<u>2.5</u> S.W.G. diameter,	<u>2.5</u> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Main & Branch Cables copper lined coated with Gama caulkhous, coated with impregnated jute tape, spun with impregnated jute band double iron bound jute spun and asphalting.
Circuit & Lamp leads: Copper lined coated with caulkhous and rubber and spun with tape insulation.
 Joints in cables, how made, insulated, and protected Soldered and covered with caulkhous and tape for lamp circuits and leads. Inhibit screw joints in watertight bases in 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 or pipes. Lamp leads are protected by wooden

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 lead covered cables protected by iron carriages.

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 buster ✓ through bulkheads, &c. crowed brass busters

How are cables carried through decks Iron galvanized stand pipes 16" high, 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 no

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 no

Where are the main switches and fuses for these lights fitted no

If in the spaces, how are they specially protected no

Are any switches or fuses fitted in bunkers no

Cargo light cables, whether portable or permanently fixed portable How fixed no

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel no

How are the returns from the lamps connected to the hull no

Are all the joints with the hull in accessible positions no

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 no

Are any switches, fuses, or joints of cables fitted in the pump room or companion no

How are the lamps specially protected in places liable to the accumulation of vapour or gas no

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.

The Gudders are the Electrical Engineers Date

COMPASSES.

Distance between dynamo or electric motors and standard compass 120 ft.

Distance between dynamo or electric motors and steering compass 130 ft.

The nearest cables to the compasses are as follows:—

A cable carrying <u>.6</u> Amperes <u>close to</u> <u> </u> feet from standard compass <u>close to</u> <u> </u> feet from steering compass
A cable carrying <u> </u> Amperes <u> </u> feet from standard compass <u> </u> feet from steering compass
A cable carrying <u> </u> Amperes <u> </u> feet from standard compass <u> </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 nil degrees on course in the case of the standard compass and nil degrees on course in the case of the steering compass.

Signed. Aktion Schiffbau "Neptun" Mulhove. Builder's Signature. Date

GENERAL REMARKS.

This is a copy of the Electric Light Installation Report made out by Mr. Föhler on the sister vessel, Yard No 340, which will probably be found to correspond with that fitted on this vessel. It is submitted that this vessel is eligible for THE RECORD. Blue light Friedrich Witt

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

Committee's Minute FRI. 24 JUN. 1921
FRI. 14 JUL. 1921
THE 3 JAN. 1922
FRI. JAN. 27 1922



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

Im. 11. 13. — Transfer.