

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 7076

Port of Hamburg Date of First Survey 17th July Date of Last Survey 30th Aug. 02 No. of Visits 8
 No. in Reg. Book 819 on the Steel S. S. Prins der Nederlanden Port belonging to Amsterdam
 Built at Hamburg By whom Blotum & Voss When built 1902
 Owners Konigl. Westind. Handelsbank Owners' Address Amsterdam
 No. 161 Electric Light Installation fitted by Blotum & Voss When fitted 1902

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Compound Steam Engine coupled direct to Pronman & Halske's Dynamo running at 260 revolutions p. minute.

Capacity of Dynamo 140 Amperes at 72 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Engine Room

Position of Main Switch Board on on having switches to groups A, B, & C of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each 2nd Class Pantry with 8 switches, 1st Class Pantry with 10 switches, Steering Engine house with 3 switches, Press space with 3 switches.

Are cut outs 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

Are all cut outs fitted in easily accessible positions yes Are the fuses of standard dimensions yes If wire fuses are used

Are the cut outs of non-oxidizable metal yes and constructed to fuse at an excess of 25 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

Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 196 arranged in the following groups:—

A Masthead & Foremast 83 lights each of 77 of 16 & 6 of 25 candle power requiring a total current of 58 Amperes

B After Ship 90 lights each of 16 candle power requiring a total current of 63 Amperes

C Eng. & M. H. Sp. 23 lights each of 16 candle power requiring a total current of 16 Amperes

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

E — lights each of — candle power requiring a total current of — Amperes

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

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

included in 6 Cargo lights of 3 of 3 x 16 = 48 candle power, whether incandescent or arc lights incandescent

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

Steering Engine House

Where are the switches controlling the masthead and side lights placed —

DESCRIPTION OF CABLES.

Main cable carrying 140 Amperes, comprised of 19 wires, each — L.S.G. diameter, 70 square inches total sectional area

Branch cables carrying 63 Amperes, comprised of 19 wires, each — L.S.G. diameter, 50 square inches total sectional area

Branch cables carrying 17 Amperes, comprised of 1 wires, each — L.S.G. diameter, 16 square inches total sectional area

Leads to lamps carrying .7 Amperes, comprised of 1 wires, each — L.S.G. diameter, 1.5 square inches total sectional area

Cargo light cables carrying 4.2 Amperes, comprised of 19 wires, each — L.S.G. diameter, 2.5 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Copper wires coated with para rubber, lead coated, hemp tape and iron bound, covered with jute fibre impregnated with coach-shook varnish.

Joints in cables, how made, insulated, and protected Soldered and coated with gutta serena and tape.

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 Iron bound cables, led through iron pipes where exposed to heat or moisture.

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 cables and carried through pipes.*

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

What special protection has been provided for the cables near boiler casings *Cables carried through pipes.*

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

How are cables carried through beams *hard wood ferrules* through bulkheads, &c. *hard wood ferrules.*

How are cables carried through decks *Iron standpipes galvanized lined with hardwood*

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

If so, how are they protected *Iron bound cables in space between Main & Spar decks*

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

If so, how are the lamp fittings and cable terminals specially protected *by glass globes and gaskets*

Where are the main switches and cut outs for these lights fitted *2nd Class Pentry*

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 *by screw & brass 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.*

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 installation is *yes* supplied with a voltmeter and *yes* an amperemeter, fixed *Main Switch Room*

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 *50 Millions Siemens* 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.

Builders *—*

Electrical Engineers

Date *—*

COMPASSES.

Distance between dynamo or electric motors and standard compass *73 ft.* } *All leads to compass above.*

Distance between dynamo or electric motors and steering compass *70 ft.* } *Spar deck and laid over double wire system.*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	Distance to	feet from standard compass	Distance to	feet from steering compass
<i>7</i>	<i>4</i>	<i>close to</i>	<i>—</i>	<i>close to</i>	<i>—</i>
<i>7</i>	<i>3</i>	<i>—</i>	<i>—</i>	<i>3</i>	<i>—</i>
<i>7</i>	<i>—</i>	<i>—</i>	<i>—</i>	<i>—</i>	<i>—</i>

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

John Rops

Builder's Signature.

Date *29th August 1902*

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 for a vessel classed in the Society's Register Book.

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

Committee's Minute

It is submitted that this installation appears to be satisfactory.