

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 7423.

Port of Antwerp Date of First Survey March 22 Date of Last Survey April 16 No. of Visits 6
 No. in Reg. Book Supp 48 on the Iron Steel SS "NEUENSTEIN" Port belonging to Hamburg
 Built at Antwerp By whom Chambers Naval Architects When built 1907
 Owners Seetransport Gesellschaft Owners Address Hamburg
 Yard No. 33 Electric Light Installation fitted by J.H. Holms & Co. When fitted 1907

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Single engine coupled direct to a compound wound 4 pole dynamo.

Capacity of Dynamo 50 Amperes at 100 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed In Engine Room

Position of Main Switch Board Engine Bulkhead having switches to groups Three of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each One aux. switch board, 3 way fuse box in pantry controlling 1 fuse box in Dettle 1 do. in Chart Room 1 do. in Pantry 1 switch board in Engine Room, 1 do. in Eng^r Quarters, 1 fuse box for Cargo lights

If cut outs are fitted on main switch board to the cables of main circuit Yes and on each auxiliary switch boards 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 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 50 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 84 arranged in the following groups:—

A	<u>2nd midship</u>	<u>32</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>20</u>	Amperes
B	<u>Engine Room</u>	<u>28</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>16</u>	Amperes
C	<u>Cargo</u>	<u>24</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>14</u>	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
	<u>2 Mast head light with</u>	<u>1</u>	lamps each of	<u>32</u>	candle power requiring a total current of	<u>2.4</u>	Amperes
	<u>2 Side light with</u>	<u>1</u>	lamps each of	<u>32</u>	candle power requiring a total current of	<u>2.4</u>	Amperes
	<u>4 Cargo lights of</u>	<u>6</u>		<u>16</u>	candle power, whether incandescent or arc lights	<u>incandescent</u>	

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

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

DESCRIPTION OF CABLES.

Main cable carrying 50 Amperes, comprised of 19 wires, each 16 L.S.G. diameter, .0612 square inches total sectional area

Branch cables carrying 20 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .0225 square inches total sectional area

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

Leads to lamps carrying 14 Amperes, comprised of 7 wires, each 17 L.S.G. diameter, .0172 square inches total sectional area

Cargo light cables carrying 16 Amperes, comprised of 7 wires, each 17 L.S.G. diameter, .0172 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Lead covered wire in cabins, Engine Room armoured cables, on deck vulcanized rubber in iron pipes

Joints in cables, how made, insulated, and protected none

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 pipes



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 pipes*

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

What special protection has been provided for the cables near boiler casings *armoured wire*

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

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

How are cables carried through decks *deck tubes*

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

If so, how are they protected *iron pipes.*

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 *✓*

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 *✓*

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 *✓*

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 *no* supplied with a voltmeter and *✓* an amperemeter, fixed *near dynamo*

The copper used is guaranteed to have a conductivity of *97* 100 per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than *600* 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.

J.H. Holmes, Esq. Electrical Engineers Date *26/4/07.*

COMPASSES.

Distance between dynamo or electric motors and standard compass *82 ft.*

Distance between dynamo or electric motors and steering compass *do.*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>20</i>	Amperes	<i>13</i>	feet from standard compass	<i>13</i>	feet from steering compass
A cable carrying	<i>6</i>	Amperes	<i>6.5</i>	feet from standard compass	<i>13</i>	feet from steering compass
A cable carrying	<i>.6</i>	Amperes	<i>3</i>	feet from standard compass	<i>13</i>	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 *East* course in the case of the standard compass and *Nil* degrees on *East* course in the case of the steering compass.

M.O.H. Reilly Builder's Signature Date *30th April 1907.*

GENERAL REMARKS.

The fittings and workmanship are good and in accordance with the Rules and the vessel is eligible in my opinion for the record of Electric Light

H.T. Cornish

Fee: fr. 80.—
applied for: 17/4/07.
paid: 18/4/07.

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

Committee's Minute

It is submitted that the Record Elec. Light be noted in the Register Books

Lloyd's Register Foundation

9.5.07

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 13.