

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 53284

Port of Belfast Date of first survey July 29th Date of last survey Oct 1st No. of visits 6
 No. in Reg. Book 33 on the Iron or Steel Pyndare Port belonging to Rotterdam
 Built at Belfast By whom Hauland & Wolff When built 1901
 Owners Netherland American S. S. Co. Owners' Address Rotterdam
 Yard No. 336 Electric Light Installation fitted by H. P. Allen & Co. When fitted 190

DESCRIPTION OF DYNAMO, ENGINE, ETC.

3 - 8 x 13 1/8" Vertical Double acting Compound engine direct coupled to 3 - underlay bipolar Compound armature dynamo

Capacity of Dynamo 300 Amperes at 62 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed in stow room of Main Engine Room

Position of Main Switch Board in stow room having switches to groups A. B. ... L of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each 1 Special Aux. switchboard in 1st class Saloon all 1st Saloon 2^d Saloon, 1 do part of 2^d Saloon, 1 do in Engine Room Saloon no 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 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 920 arranged in the following groups:—

<u>K.</u>	<u>132</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>42</u>	Amperes
<u>A.</u>	<u>100</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>106</u>	Amperes
<u>B.</u>	<u>80</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>80</u>	Amperes
<u>C.</u>	<u>61</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>61</u>	Amperes
<u>D.</u>	<u>49</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>49</u>	Amperes
<u>E.</u>	<u>50</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>56</u>	Amperes
<u>F.</u>	<u>110</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>110</u>	Amperes
<u>G.</u>	<u>65</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>65</u>	Amperes
<u>H.</u>	<u>50</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>50</u>	Amperes
<u>I.</u>	<u>74</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>74</u>	Amperes
<u>J.</u>	<u>90</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>90</u>	Amperes
<u>2</u>	Must head light with <u>2</u> lamps each of <u>32</u>	candle power requiring a total current of	<u>4</u>	Amperes		
<u>2</u>	Side light with <u>1</u> lamps each of <u>32</u>	candle power requiring a total current of	<u>4</u>	Amperes		
<u>7</u>	Cargo lights of <u>96</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 300 Amperes, comprised of 37 wires, each 12 L.S.G. diameter, .320 square inches total sectional area

Branch cables carrying 50 Amperes, comprised of 19 wires, each 16 L.S.G. diameter, .062 square inches total sectional area

Branch cables carrying 35 Amperes, comprised of 19 wires, each 18 L.S.G. diameter, .036 square inches total sectional area

Leads to lamps carrying 4 Amperes, comprised of 7 wires, each 22 L.S.G. diameter, .0043 square inches total sectional area

Cargo light cables carrying 6 Amperes, comprised of 7 wires, each 20 L.S.G. diameter, .0073 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Pure Para Rubber, vulc^d Rubber, India Rubber Coated tape & Braided...

Joints in cables, how made, insulated, and protected All joints soldered & protected by layer of pure Para rubber, self tape & Synthetic tape & black flannel varnish.

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 In strong wood casing & covered

WS 83-0014



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 *Lead covered*

Cables in Exposed places

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Lead covered + Alum case*

What special protection has been provided for the cables near boiler casings *Lead covered + Alum*

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

How are cables carried through beams *Hole fibre bushes* through bulkheads, &c. *Iron flange*

How are cables carried through decks *L.I. Deck tube bushes with fibre*

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 *Strong wood casing + filling with coal tar cover*

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 *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 *Welded to main*

How are the returns from the lamps connected to the hull *2 1/2" brass lead screw soldered to wire*

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 supplied with a voltmeter and *3* an amperemeter, fixed *on main switch board*

The copper used is guaranteed to have a conductivity of *100* per cent. that of pure copper. *(Mather & Plattner)*

Insulation of cables is guaranteed to have a resistance of not less than *2500* 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.

Electrical Engineers Date *5.19.01*

COMPASSES.

Distance between dynamo or electric motors and standard compass *136' ft.*

Distance between dynamo or electric motors and steering compass *168' ft.*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>50</i>	Ampere	<i>18</i>	feet from standard compass	<i>48</i>	feet from steering compass
A cable carrying	<i>55</i>	Ampere	<i>22</i>	feet from standard compass	<i>20</i>	feet from steering compass
A cable carrying		Ampere		feet from standard compass		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 *all* course in the case of the standard compass and *nil* degrees on *all* course in the case of the steering compass.

Wm. Harland & Wolff Ltd. Builder's Signature. Date *10th Oct 1901*

GENERAL REMARKS.

The installation is of a satisfactory kind, and has been fitted in accordance with the Rules.

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

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 1.

