

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 52953

Port of Newcastle Date of First Survey Nov. 6 Date of Last Survey Nov. 29 '07 No. of Visits 5
 No. in Reg. Book 314 on the ~~Iron~~ Steel S.S. "GANELON" Port belonging to Bremen
 Built at Wallend-on-Tyne By whom Wan. Hunter & Wigham Richardson Ltd. When built 1907
 Owners Roland Linie Aktien Ges. Owners' Address Bremen
 Yard No. 779 Electric Light Installation fitted by Wan. Hunter & Wigham Richardson Ltd. When fitted 1907

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Compound Engine $\frac{6 \cdot 9 \frac{1}{2}}{6} \times 350 \text{ Rev}$

Capacity of Dynamo 105 Amperes at 100 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Engine room Whether single or double wire system is used double
 Position of Main Switch Board Near dynamo having switches to groups four of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each none

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 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

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

Total number of lights provided for 15742 Arms arranged in the following groups:—

A	<u>42 + 1 arc</u> lights each of	<u>16 CP</u>	candle power requiring a total current of	<u>33</u>	Amperes
B	<u>33</u> lights each of	<u>16 CP</u>	candle power requiring a total current of	<u>19</u>	Amperes
C	<u>52</u> lights each of	<u>16 CP</u>	candle power requiring a total current of	<u>29</u>	Amperes
D	<u>30 + 1 arc</u> lights each of	<u>16 CP</u>	candle power requiring a total current of	<u>27</u>	Amperes
E	lights each of		candle power requiring a total current of		Amperes
	<u>2</u> Mast head light with <u>1</u> lamps each of	<u>32</u>	candle power requiring a total current of		Amperes
	<u>2</u> Side light with <u>1</u> lamps each of	<u>32</u>	candle power requiring a total current of		Amperes

9 Cargo lights (6 light clusters) 96 candle power, whether incandescent or arc lights 42 Arc lights
 If arc lights, what protection is provided against fire, sparks, &c. iron reflectors with glass underneath

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

DESCRIPTION OF CABLES.

Main cable carrying 107 Amperes, comprised of 19 wires, each 12 L.S.G. diameter, .159 square inches total sectional area
 Branch cables carrying 33 Amperes, comprised of 7 wires, each 14 L.S.G. diameter, .034 square inches total sectional area
 Branch cables carrying 19 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .022 square inches total sectional area
 Leads to lamps carrying .56 Amperes, comprised of 3 wires, each 22 L.S.G. diameter, .0018 square inches total sectional area
 Cargo light cables carrying 3.5 Amperes, comprised of 110 wires, each 38 L.S.G. diameter, .0032 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Pure vulcanized india rubber, taped & braided, lead covered - and armoured where necessary

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

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 Lead cov. & galv. steel armour clipped up

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 cov. armour

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Lead cov. armour

What special protection has been provided for the cables near boiler casings Lead armour

What special protection has been provided for the cables in engine room Lead armour

How are cables carried through beams Silv. ferrules through bulkheads, &c. watertight glands

How are cables carried through decks Through deck tubes

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

If so, how are they protected Lead covering armour

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 watertight plug & sockets

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 — supplied with a voltmeter and — an amperemeter, fixed main switch bd.

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 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.

SWAN, HUNTER, & WILKINSON RICHARDSON, LD.

J. J. Culley

Secretary.

Electrical Engineers

Date

20/12/07

COMPASSES.

Distance between dynamo or electric motors and standard compass 100 feet

Distance between dynamo or electric motors and steering compass 90 "

The nearest cables to the compasses are as follows:—

A cable carrying <u>12</u> Amperes <u>10</u> feet from standard compass <u>10</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 — degrees on — course in the case of the standard compass and — degrees on — course in the case of the steering compass.

SWAN, HUNTER, & WILKINSON RICHARDSON, LD.

J. J. Culley

Secretary.

Builder's Signature.

Date

20/12/07

GENERAL REMARKS.

This installation has been fitted in accordance with the Rules. tested & found satisfactory

J. J. Culley

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 Reg. Book.

Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.