

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 18

Port of Newcastle-on-Tyne Date of Last Survey Nov 26 1901 No. of Visits 18
 No. in on the Iron or Steel 1/2 "Kinsman" Port belonging to London
 Reg. Book 16 Built at Newcastle-on-Tyne By whom Sir W. G. Armstrong Whitworth & Co. Ltd. when built 1901
 Owners C. J. Bowering & Co. Owners' Address London
 Yard No. 717 Electric Light Installation fitted by J. A. Holmes & Co. When fitted 1901

DESCRIPTION OF DYNAMO, ENGINE, ETC.

The 6 1/2" x 6" open type Engine Auto Gov.
 coupled to "Castle" dynamo

Capacity of Dynamo 83.5 Amperes at 60 Volts, whether continuous or alternating current

Where is Dynamo fixed in Engine Room on starting platform

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

Positions of auxiliary switch boards and numbers of switches on each A. 1 fixed in Pantry having 4 switches

6 D.P. fuses A. 2 fixed in Wheel House with 4 sws & fuses. A. 3 fixed in Carpenter's Room with 3 sws & fuses. B. 1 fixed in Engine Room with 7 circles & 8 D.P. fuses. B. 2 fixed in Mess Room with 3 sws & fuses

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 no reduction and to each lamp circuit

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 _____ arranged in the following groups:—

A	<u>36</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>36</u>	Amperes
B	<u>34</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>34</u>	Amperes
C		lights each of		candle power requiring a total current of		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</u>	Mast head lights with	<u>2</u> lamps each of	<u>16</u>	candle power requiring a total current of	<u>4</u> Amperes
	<u>2</u>	Side light with	<u>2</u> lamps each of	<u>16</u>	candle power requiring a total current of	<u>4</u> Amperes
		Cargo lights of			candle power, whether incandescent or arc lights	

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

Where are the switches controlling the masthead and side lights placed in the Wheel House

DESCRIPTION OF CABLES.

Main cable carrying 74 Amperes, comprised of 19 wires, each 14 L.S.G. diameter, .095 square inches total sectional area

Branch cables carrying 40 Amperes, comprised of 19 wires, each 17 L.S.G. diameter, .046 square inches total sectional area

Branch cables carrying 34 Amperes, comprised of 10 wires, each Autys Per L.S.G. diameter, .035 square inches total sectional area

Leads to lamps carrying 1 Amperes, comprised of 7 wires, each 2 1/2 L.S.G. diameter, 0.0049 square inches total sectional area

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

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Henley's Class C cables are insulated with pure rubbers, vulcanized taped, braided & compounded

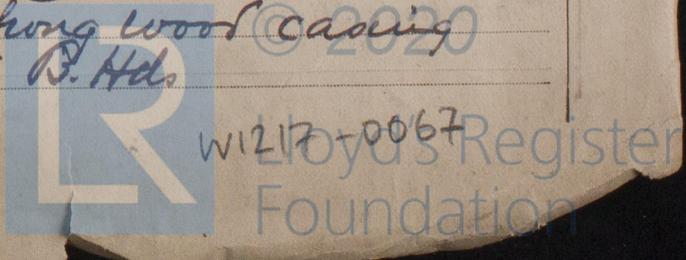
Joints in cables, how made, insulated, and protected carefully twisted & soldered & insulated with Hanson tapes

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 None

Are there any joints in or branches from the cable leading from dynamo to main switch board None

How are the cables led through the ship, and how protected in Bunkers in strong wood casing

Engine Room Armoured wire clipped to B. Hds



OF INSULATION, PROTECTION, ETC.—continued.

DONKEY B

in places always accessible *Yes*

Made at *Lead covered wire*
 Working *What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture*

No. of *Armed wire*
 entries *What special protection has been provided for the cables near galleys or oil lamps or other sources of heat*

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

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

How are cables carried through beams *bushed with fibre* through bulkheads, &c. *stuffing glands*

How are cables carried through decks *in lead or iron tubes flanged & made watertight*

Are any cables run through coal bunkers *Yes* or cargo spaces *Yes* or spaces which may be used for carrying cargo, stores, or baggage *Yes*

If so, how are they protected *in Strong wood casing*

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

If so, how are the lamp fittings and cable terminals specially protected *in Strong C.I. fittings with C.I. Covers*

Where are the main switches and cut outs for these lights fitted *in Engine Room*

If in the spaces, how are they specially protected *none*

Are any switches or cut outs fitted in bunkers *none*

Cargo light cables, whether portable or permanently fixed *none* How fixed

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *double wired*

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 *Yes*

Are any switches, cut outs, or joints of cables fitted in the pump room or companion *none*

How are the lamps specially protected in places liable to the accumulation of vapour or gas *in Strong W. light fittings*

The installation is *Complete* supplied with a voltmeter and *not* an amperemeter, fixed *on Main Board*

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.

J. H. Brown & Co

Electrical Engineers

Date *Nov 26/01*

COMPASSES.

Distance between dynamo or electric motors and standard compass *about 120 feet*

Distance between dynamo or electric motors and steering compass *" 112 "*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>1</i>	Amperes	<i>about</i>	feet from standard compass	<i>2</i>	feet from steering compass
A cable carrying	<i>7</i>	Amperes	<i>"</i>	feet from standard compass	<i>6</i>	feet from steering compass
A cable carrying	<i>40</i>	Amperes	<i>"</i>	feet from standard compass	<i>15</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 *all* course, in the case of the standard compass and *nil* degrees on *all* course, in the case of the steering compass.

Robert Angus

Builder's Signature.

Date *28th November 1901*

GENERAL REMARKS.

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

Robert Angus

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

Committee's Minute

It is submitted that this installation appears to meet the Rule requirements.



Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 14.