

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 14706

Port of West Hartlepool Date of First Survey ✓ Date of Last Survey while No. of Visits building
 No. in Reg. Book ✓ on the Iron or Steel SS Kathlambe Port belonging to South Shields
 Built at West Hartlepool By whom W. Gray & Co. Ltd When built 1913
 Owners Bucknill & Co. Ltd Owners' Address South Shields
 Yard No. 825 Electric Light Installation fitted by Messrs. Clarke, Chapman & Co. When fitted 1913

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One single cylinder double acting open type vertical engine direct coupled to a continuous current compound wound dynamo.
 Capacity of Dynamo 182 Amperes at 110 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed in Engine Room Whether single or double wire system is used double
 Position of Main Switch Board near having switches to groups A B C D E F G H of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Each light & group of lights provided with switches as required

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, slate & porcelain

Total number of lights provided for 146 - 1600 arranged in the following groups:-

A	<u>42</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>21.4</u>	Amperes
B	<u>27</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>11.2</u>	Amperes
C	<u>26</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>13.2</u>	Amperes
D	<u>12</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>6.1</u>	Amperes
E	<u>Wireless</u>	lights each of	<u>—</u>	candle power requiring a total current of	<u>20</u>	Amperes
<u>2</u>	Mast head light with	<u>1</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>1</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>1</u>	Amperes
<u>7</u>	Cargo lights of	<u>6 - 16</u>	candle power, whether incandescent or arc lights	<u>incandescent</u>		

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

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

DESCRIPTION OF CABLES.

Main cable carrying 182 Amperes, comprised of 37 wires, each 13 L.S.G. diameter, 25000 square inches total sectional area
 Branch cables carrying 21.4 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, 02214 square inches total sectional area
 Branch cables carrying 13.7 Amperes, comprised of 7 wires, each 20 L.S.G. diameter, 00900 square inches total sectional area
 Leads to lamps carrying 51 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, 00781 square inches total sectional area
 Cargo light cables carrying 3 Amperes, comprised of 168 wires, each 38 L.S.G. diameter, 00502 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Vulcanized india rubber Kaped & braided & lead covered where exposed steel armored cable

Joints in cables, how made, insulated, and protected no joints except mechanical ones.

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, no

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 covered & armored cables run in galvanneal iron pipes along deck, in bridge spaces through beams & clipped to deck with string W.I. clips

DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible no.

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture Lead covered & steel armoured

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Lead covered & steel armoured

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 in lead bushes through bulkheads, &c. in WT glands

How are cables carried through decks in galvanized iron deck tiles

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

If so, how are they protected _____

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 to WTC connection boxes

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

How are the returns from the lamps connected to the hull _____

Are all the joints with the hull in accessible positions _____

The installation is new supplied with a voltmeter and also an amperemeter, fixed in switchboard

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.

For Clarke, Chapman & Co., Ltd.

Electrical Engineers

Date

Aug. 14th 1913.

COMPASSES.

Distance between dynamo or electric motors and standard compass 112 ft

Distance between dynamo or electric motors and steering compass 106 "

The nearest cables to the compasses are as follows:—

A cable carrying	.51	Amperes	12	feet from standard compass	6	feet from steering compass
A cable carrying	.51	Amperes	6	feet from standard compass	12	feet from steering compass
A cable carrying	_____	Amperes	_____	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.

FOR WILLIAM GRAY & CO. LIMITED

R. W. Dryden

Builder's Signature.

Date

15th Aug 1913.

GENERAL REMARKS.

The fitting of the wire throughout this vessel is as stated in this report and appears to be in accordance with the Committee's recommendations.

It is submitted that this vessel is eligible for

THE RECORD.

Elec light

James James

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

Committee's Minute



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.