

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 71392

Port of NEWCASTLE-ON-TYNE Date of First Survey 3rd September 1918 Date of Last Survey 22nd October 1918 No. of Visits 9
 No. in Reg. Book on the Iron or Steel HMS. STAKE Port belonging to _____
 Built at South Shields By whom Charles Remondson When built 1918
 Owners British Admiralty Owners' Address Whitehall London
 Yard No. 199 Electric Light Installation fitted by Thomas Claude Chapman & Co When fitted 1918

DESCRIPTION OF DYNAMO, ENGINE, ETC.

See enclosed compound engine direct coupled to two compound wound continuous current dynamo
 Capacity of Dynamo 119 Amperes at 105 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed In Engine Room lower platform Whether single or double wire system is used Double
 Position of Main Switch Board Near Dynamo having switches to groups A B C D E F 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 fuses 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 fuses fitted to both flow and return wires or cables of all circuits including lamp circuits Yes
 Are the fuses of non-oxidisable metal Yes and constructed to fuse at an excess of 50% per cent over the normal current
 Are all fuses 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 fuses constructed of incombustible materials and fitted on incombustible bases Yes Brass boxes with mica insulation

Total number of lights provided for 172 arranged in the following groups:—

A	Aft Accommodation	lights each of <u>5-16cp. 19-30W MF.</u>	candle power requiring a total current of <u>13.4</u>	Amperes
B	Engine Room	lights each of <u>5-16cp. 29-30W MF. 16-50</u>	candle power requiring a total current of <u>39.1</u>	Amperes
C	P. Deck	lights each of <u>7-16cp. 17-30W MF.</u>	candle power requiring a total current of <u>8.5</u>	Amperes
D	Navigation	lights each of <u>4-8cp. 11-16cp. 5-30W MF. 1-32</u>	candle power requiring a total current of <u>9.4</u>	Amperes
E	Forward	lights each of <u>5-16cp. 29-30W MF.</u>	candle power requiring a total current of <u>10.8</u>	Amperes
F	Widest	lights each of <u>1-16cp. 4-30W MF.</u>	candle power requiring a total current of <u>1.6</u>	Amperes
1	Mast head light with	1 lamp each of <u>16</u>	candle power requiring a total current of <u>1.6</u>	Amperes
2	Side light with	1 lamp each of <u>1-16cp. 1-32</u>	candle power requiring a total current of <u>1.6</u>	Amperes
2	Cargo lights of	<u>8-50cp each</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 On bridge

DESCRIPTION OF CABLES.

Main cable carrying	<u>119</u> Amperes, comprised of	<u>37</u> wires, each	<u>15</u> S.W.G. diameter, <u>.150</u> square inches total sectional area
Branch cables carrying	<u>39.1</u> Amperes, comprised of	<u>19</u> wires, each	<u>20</u> S.W.G. diameter, <u>.019</u> square inches total sectional area
Branch cables carrying	<u>10.8</u> Amperes, comprised of	<u>7</u> wires, each	<u>18</u> S.W.G. diameter, <u>.0125</u> square inches total sectional area
Leads to lamps carrying	<u>1.8</u> Amperes, comprised of	<u>1</u> wires, each	<u>17</u> S.W.G. diameter, <u>.0025</u> square inches total sectional area
Cargo light cables carrying	<u>0.3</u> Amperes, comprised of	<u>19</u> wires, each	<u>22</u> S.W.G. diameter, <u>.019</u> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Insulated india rubber taped & braided & lead covered cable
 Joints in cables, how made, insulated, and protected no joints except mechanical used
 Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances 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 Lead covered cables run in galvanized sheet iron plating secured to underside of beams & frames & along casings



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 covered with galvanized sheet iron plates

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Cables run on raised platform

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 WT copper backed 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 Lead covered cables run on galvanized sheet iron plating

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 Special WT brass & cast iron fittings

Where are the main switches and fuses for these lights fitted in accommodation spaces

If in the spaces, how are they specially protected " " " "

Are any switches or fuses fitted in bunkers No

Cargo light cables, whether portable or permanently fixed Portable How fixed to WT Connection Boxes

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

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

Are all the joints with the hull in accessible positions "

Is the installation supplied with a voltmeter Yes, and with an amperemeter Yes, fixed on switchboard

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and fuses fitted in positions not liable to the accumulation of petroleum vapour or gas "

Are any switches, fuses, 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 not less than that of the Engineering Standards Committee's standard, and the wires are protected by tinning from the sulphur compounds present in the insulating material.

Insulation of cables is guaranteed to have a resistance of not less than 1250 megohms per statute mile at 60° Fahrenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than 500 volts and while the cable is still immersed.

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 For Clarke, Chapman & Co., Ltd.

W. Woodson Electrical Engineers Date March 4th 1919

COMPASSES.

Distance between dynamo or electric motors and standard compass 96 ft

Distance between dynamo or electric motors and steering compass 90 "

The nearest cables to the compasses are as follows:—

A cable carrying	<u>2.1</u>	Amperes	<u>12</u>	feet from standard compass	<u>6</u>	feet from steering compass
A cable carrying	<u>2.1</u>	Amperes	<u>6</u>	feet from standard compass	<u>12</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 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.

James J. Arnoldson & Co. Builder's Signature. Date March 11th 1919

GENERAL REMARKS.

Tested & found satisfactory in all respects

It is submitted that this vessel is eligible for THE RECORD. Elec Light

18/3/19

W.T. Badger

Surveyor to Lloyd's Register of Shipping.

Committee's Minute



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