

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 9339.

Port of Middlesbrough Date of First Survey While Date of Last Survey Building No. of Visits
 No. in on the Iron or Steel S.S. Felimston Port belonging to
 Reg. Book Built at Stockton By whom Thos Craig Taylor & Co When built 1916
 Owners Owners' Address
 Yard No. 170 Electric Light Installation fitted by Thos Falermer & Cross When fitted 1916
Newcastle-on-Tyne

DESCRIPTION OF DYNAMO, ENGINE, ETC.

8 1/2" x 7" Open type engine to work with 100 lbs of steam. Coupled direct to
1 compound wound dynamo
 Capacity of Dynamo 150 Amperes at 110 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Starting 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. of lights, &c., as below
 Positions of auxiliary fuse boards and numbers of fuses on each 1 x 2 Way in Bathroom, 1 x 10 Way in Bathroom
1 x 10 Way in Bathroom, 1 x 7 Way in Mess aft, 1 x 8 Way in Cook's berth, 1 x 4 Way in Engine Room
1 x 9 " " Engine Room

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-oxidizable metal Yes and constructed to fuse at an excess of 25 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

Total number of lights provided for 191 arranged in the following groups:—

A Officers 81	lights each of	16	candle power requiring a total current of	44	Amperes
B Aft. 22	lights each of	4	candle power requiring a total current of	11.4	Amperes
C Engine room 51	lights each of	4	candle power requiring a total current of	27.8	Amperes
D Engine Room 37	lights each of	4	candle power requiring a total current of	20.1	Amperes
E Wireless	lights each of (switch only)		candle power requiring a total current of		Amperes
2 Mast head light with	1 lamp each of	32	candle power requiring a total current of	2.4	Amperes
2 Side light with	1 lamp each of	32	candle power requiring a total current of	2.4	Amperes
5 Cargo lights of	5 x 32		candle power, whether incandescent or arc lights	Incandescent	

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

Where are the switches controlling the masthead and side lights placed Bathroom

DESCRIPTION OF CABLES.

Main cable carrying 150 Amperes, comprised of 37 wires, each 15 S.W.G. diameter, .149 square inches total sectional area
 Branch cables carrying 44 Amperes, comprised of 19 wires, each 17 S.W.G. diameter, .046 square inches total sectional area
 Branch cables carrying 27.8 Amperes, comprised of 7 wires, each 15 S.W.G. diameter, .0182 square inches total sectional area
 Leads to lamps carrying 5.4 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0018 square inches total sectional area
 Cargo light cables carrying 5.4 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, .0072 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Tinned copper Pmc + Vulcanized J.R. lined braided + compounded
Lead covered in bunks, Lead covered + armoured elsewhere

Joints in cables, how made, insulated, and protected

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 bunks, 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

How are the cables led through the ship, and how protected Lead covered + armoured run through
bunks & clipped up under deck



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DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *Usually*

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *Find covered - Am*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *"*

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 *Fibre bushes* through bulkheads, &c. *W. J. glands*

How are cables carried through decks *Deck holes*

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 *Find covered - Amoured*

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 fuses for these lights fitted

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 *W. J. glands*

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

Is the installation supplied with a voltmeter *Yes*, and with an amperemeter *Yes*, fixed *on Main board*

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 *600* 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 in good order and safe working condition.

Galvanic Corrosion

Electrical Engineers

Date *May 15th 1916*

COMPASSES.

Distance between dynamo or electric motors and standard compass *106 ft.*

Distance between dynamo or electric motors and steering compass *96 "*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>14</i>	<i>15</i>	<i>10</i>	<i>10</i>
<i>'84</i>	<i>10</i>	<i>10</i>	<i>10</i>

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 *Nil* course in the case of the standard compass and *Nil* degrees on *Nil* course in the case of the steering compass.

FOR CRAIG, TAYLOR & CO. LIMITED,

John Farthing

Builder's Signature.

Date *18th May, 1916*

GENERAL REMARKS.

This installation has been fitted in accordance with the Rules. The materials and workmanship are good and on completion the installation was tested under full working conditions and found satisfactory.

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

JWD 26/5/16

Wm Morrison

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

Committee's Minute

FRI. 26 MAY. 1916

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

Im. 114—Transfer.



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