

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 83641

Port of *Ipswich* Date of First Survey *5th March* Date of Last Survey *5th October* No. of Visits *45*
 No. in Reg. Book on the *Steel* *Ship "St. Austell"* Port belonging to *London*
 Built at *Ct Yarmouth* By whom *Crabtree & Co* N° *175* When built *1920*.
 Owners *Admiralty* Owners' Address *Admiralty*
 Yard No. *175* Electric Light Installation fitted by *Geo Hyde* When fitted *1920*.

DESCRIPTION OF DYNAMO, ENGINE, ETC. *De Laval Steam Turbine, 20 B.H.P.*
geared 10:1 coupled to a 13 K.W. compound wound, direct current
electric generator.
 Capacity of Dynamo *125* Amperes at *105* Volts, whether continuous or alternating current *Continuous*
 Where is Dynamo fixed *Starboard side in Engine Room* Whether single or double wire system is used *Double*
 Position of Main Switch Board *Starboard side in Engine Room* Having switches to groups *A.B.C.* of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each *lights & groups 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-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 *86* arranged in the following groups:—

A <i>Navigation</i>	lights each of	<i>32</i>	<i>16</i>	candle power requiring a total current of	<i>7.5</i>	Amperes
B <i>Engine Room</i>	lights each of	<i>16</i>		candle power requiring a total current of	<i>20</i>	Amperes
C <i>Aft lighting</i>	lights each of	<i>16</i>		candle power requiring a total current of	<i>8</i>	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
<i>2</i>	Mast head light with <i>1</i> lamps each of	<i>32</i>		candle power requiring a total current of	<i>2</i>	Amperes
<i>2</i>	Side light with <i>1</i> lamps each of	<i>32</i>		candle power requiring a total current of	<i>2</i>	Amperes
<i>2 - 6</i>	Cargo lights of	<i>32</i>		candle power, whether incandescent or arc lights <i>incandescent</i>		Amperes

If are lights, what protection is provided against fire, sparks, &c. *No arc lights*

Where are the switches controlling the masthead and side lights placed *Wheelhouse*

DESCRIPTION OF CABLES.

Main cable carrying	<i>150</i> Amperes, comprised of	<i>37</i> wires, each	<i>15</i> S.W.G. diameter, <i>.15</i> square inches total sectional area
Branch cables carrying	<i>34</i> Amperes, comprised of	<i>7</i> wires, each	<i>18</i> S.W.G. diameter, <i>.0125</i> square inches total sectional area
Branch cables carrying	<i>20</i> Amperes, comprised of	<i>3</i> wires, each	<i>18</i> S.W.G. diameter, <i>.00532</i> square inches total sectional area
Leads to lamps carrying	<i>9.8</i> Amperes, comprised of	<i>1</i> wires, each	<i>17</i> S.W.G. diameter, <i>.00246</i> square inches total sectional area
Cargo light cables carrying	<i>7.2</i> Amperes, comprised of	<i>3</i> wires, each	<i>18</i> S.W.G. diameter, <i>.0018</i> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

lead covered cable, in dielectric, braided and

Joints in cables, how made, insulated, and protected *No joints*

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

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 *in Steel Tubes & perforated sheet plate*

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 sheathed* ✓

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

What special protection has been provided for the cables near boiler casings *Lead sheathed* ✓

What special protection has been provided for the cables in engine room *Lead sheathed* ✓

How are cables carried through beams *Lead bushes* ✓

How are cables carried through decks *Steel Tubes* ✓

Are any cables run through coal bunkers *Yes* ✓

or cargo spaces *Yes* ✓

or spaces which may be used for carrying cargo, stores, or baggage *No* ✓

If so, how are they protected *in steel Tubes* ✓

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 ✓

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 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 *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.

C. Hyde

Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass *75 ft.*

Distance between dynamo or electric motors and steering compass *75 ft.*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>20</i>	Amperes	<i>10</i>	feet from standard compass	<i>3'</i>	feet from steering compass
A cable carrying	—	Amperes	—	feet from standard compass	—	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 *any* course in the case of the standard compass and *Nil* degrees on *any* course in the case of the steering compass.

Builder's Signature.

Date

GENERAL REMARKS.

The Electric Installation has been fitted in accordance with the Specification and Society's Rules, workmanship and materials are good. Afterwards tried and tested under working conditions and found Satisfactory

It is submitted that this vessel is eligible for THE RECORD

The light *1.16/1/20* Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.