

# REPORT ON ELECTRIC LIGHTING INSTALLATION.

NO. 49,342

Port of Sunderland Date of First Survey \_\_\_\_\_ Date of Last Survey 30 July 98 No. of Visits \_\_\_\_\_  
 No. in Reg. Book on the ~~Iron~~ Steel S.S. "Suscarora" Port belonging to London  
 Built at Sunderland By whom Sir James Laing When built 1898  
 Owners The Suscarora S.S. Co. Ltd Owners' Address London  
 Yard No. 555 Electric Light Installation fitted by Holmes & Co. When fitted 1898

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

1-9 1/2 x 9" spec. R.D. & J. left hand engine to work at 80 lbs sq"  
No. 12-14 dynamo compound wound  
 Capacity of Dynamo 230 Amperes at 60 Volts, whether continuous or alternating current Cont.  
 Where is Dynamo fixed In Engine Room  
 Position of Main Switch Board \_\_\_\_\_ having switches to groups \_\_\_\_\_ of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each As below

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

Total number of lights provided for 117 arranged in the following groups:—

A Foremast	11 lights each of 16	candle power requiring a total current of 16	Amperes
B Mainmast	33 lights each of 16	candle power requiring a total current of 33	Amperes
C Mast	20 lights each of 16	candle power requiring a total current of 20	Amperes
D Deck	44 lights each of 16	candle power requiring a total current of 44	Amperes
E aft	15 lights each of 16	candle power requiring a total current of 15	Amperes
F Engine	9 lights each of 16	candle power requiring a total current of 9	Amperes
1 Mast head light with	lamps each of	candle power requiring a total current of 32	Amperes
2 Side light with	lamps each of	candle power requiring a total current of 4	Amperes
Bunks port	7 Cargo lights of 16	candle power, whether incandescent	112
Bunks starboard	10 Cargo lights of 16		160

If arc lights, what protection is provided against fire, sparks, &c. \_\_\_\_\_  
 Where are the switches controlling the masthead and side lights placed 200 x 16cp 6 x 16cp 10 x 50cp

## DESCRIPTION OF CABLES.

Main cable carrying 230 Amperes, comprised of 37 wires, each 13 L.S.G. diameter, 246 square inches total sectional area  
 Branch cables carrying \_\_\_\_\_ Amperes, comprised of \_\_\_\_\_ wires, each \_\_\_\_\_ L.S.G. diameter, \_\_\_\_\_ square inches total sectional area  
 Branch cables carrying \_\_\_\_\_ Amperes, comprised of \_\_\_\_\_ wires, each \_\_\_\_\_ L.S.G. diameter, \_\_\_\_\_ square inches total sectional area  
 Leads to lamps carrying \_\_\_\_\_ Amperes, comprised of \_\_\_\_\_ wires, each \_\_\_\_\_ L.S.G. diameter, \_\_\_\_\_ 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.

Henlys Glass A. 2000 m. resistance  
 Joints in cables, how made, insulated, and protected Soldered. Canvas & IR.  
Iron Head tubes

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 bunks, 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 through wood casing in engine room through bulk



Referred to the Chief Engineer's Report

**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 Leak casing

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

What special protection has been provided for the cables near boiler casings Leak casing

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

How are cables carried through beams Fibre Straps through bulkheads, &c. Fibre Straps

How are cables carried through decks Iron & lead 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 No

If so, how are they protected In iron pipes

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

If so, how are the lamp fittings and cable terminals specially protected cast iron covers

Where are the main switches and cut outs for these lights fitted in engine room etc. (not in bunkers)

If in the spaces, how are they specially protected

Are any switches or cut outs fitted in bunkers ✓

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

**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 fittings yes. no joints. separate wires

How are the lamps specially protected in places liable to the accumulation of vapour or gas special covered & guarded fittings to each lamp

The installation is yes supplied with a voltmeter and yes an amperemeter, fixed of Main Deck

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 2000 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. Williams Electrical Engineers Date Sept 5/98

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 97 ft

Distance between dynamo or electric motors and steering compass 100 "

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	<u>20</u>	feet from standard compass	<u>15</u>	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 3° degrees on \_\_\_\_\_ course in the case of the standard compass and 4° degrees on \_\_\_\_\_ course in the case of the steering compass.

J. J. Dunning Builder's Signature. Date Sept 10 1898

**GENERAL REMARKS.**

This installation as far as can be seen appears to be in accordance with the requirements of the Rules

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

Committee's Minute

It is submitted that this installation appears to be in accordance with the Rules

10 only last

Lloyd's Register Foundation

24.9.98

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM NO. 13.