

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 32702.

Port of Newcastle Date of First Survey Date of Last Survey No. of Visits
 No. in on the Iron or Steel 55" Champion " Port belonging to Newcastle RSN
 Reg. Book Built at South Shields By whom J P Rennoldson & Son When built
 Owners James & Alexander Brown Owners Address
 Yard No. 168 Electric Light Installation fitted by Clarke Chapman & Co When fitted Dec 1895

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Double acting, Single Cylinder high speed, Open engine, Coupled direct to a compound wound Continuous Current dynamo.

Capacity of Dynamo 110 Amperes at 65 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed on Starboard Side of main engine room

Position of Main Switch Board Starboard Side of eng. room having switches to groups A. B. & C. of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each None

If cut outs are fitted on main switch board to the cables of main circuit Yes and on each auxiliary switch boards to the cables of auxiliary circuits — and at each position where a cable is branched or reduced in size — 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 —

Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases Yes

Total number of lights provided for 54 arranged in the following groups:—

A	<u>20</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>20</u>	Amperes
B	<u>34</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>34</u>	Amperes
C	<u>1 projector</u>	lights each of	<u>—</u>	candle power requiring a total current of	<u>60</u>	Amperes
D		lights each of		candle power requiring a total current of		Amper
E		lights each of		candle power requiring a total current of		Amperes
	<u>2 Mast head lights with</u>	<u>2 lamps each of</u>	<u>16</u>	candle power requiring a total current of	<u>4</u>	Amperes
	<u>2 Side light with</u>	<u>2 lamps each of</u>	<u>16</u>	candle power requiring a total current of	<u>4</u>	Amperes
	<u>—</u>	<u>Cargo lights of</u>		candle power, whether incandescent or arc lights		

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

Where are the switches controlling the masthead and side lights placed in locked box in wheel house

DESCRIPTION OF CABLES.

Main cable carrying	<u>160</u>	Amperes, comprised of	<u>19</u>	wires, each	<u>13</u>	L.S.G. diameter,	<u>.129</u>	square inches total sectional area
Branch cables carrying	<u>60</u>	Amperes, comprised of	<u>19</u>	wires, each	<u>16</u>	L.S.G. diameter,	<u>.064</u>	square inches total sectional area
Branch cables carrying	<u>34</u>	Amperes, comprised of	<u>19</u>	wires, each	<u>18</u>	L.S.G. diameter,	<u>.0349</u>	square inches total sectional area
Leads to lamps carrying	<u>1</u>	Amperes, comprised of	<u>1</u>	wires, each	<u>18</u>	L.S.G. diameter,	<u>.0018</u>	square inches total sectional area
Cargo light cables carrying	<u>—</u>	Amperes, comprised of		wires, each		L.S.G. diameter,		square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

In cabins etc ordinary class K Cable of Silveston make
 In exposed positions in engine room the cables are lead covered

Joints in cables, how made, insulated, and protected Soldered. pure rubber. pure rubber tape. pure rubber black compound tape & varnished

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

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 strong wood casing protected by a strong outer casing

DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *Yes except bunkers*
 What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *Lead covered*
 What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Lead covered*
 What special protection has been provided for the cables near boiler casings *Lead covered*
 What special protection has been provided for the cables in engine room *Lead covered*
 How are cables carried through beams *in teak insulators* through bulkheads, &c. *in h. f. glands*
 How are cables carried through decks *in deck 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 *Yes*
 If so, how are they protected *by an extra heavy casing of wood*
 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 *On main Switchboard*
 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 *How fixed*
 In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *Double*
 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
 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 installation is *—* supplied with a voltmeter and *—* an amperemeter, fixed *—*

The copper used is guaranteed to have a conductivity of *98* per cent. that of pure copper.
 Insulation of cables is guaranteed to have a resistance of not less than *600 (Six hundred)* 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

Dec 24/95

MANAGING DIRECTOR

COMPASSES.

Distance between dynamo or electric motors and standard compass *No Standard*
 Distance between dynamo or electric motors and steering compass *41-0"*
 The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>60</i>	<i>✓</i>	<i>7'</i>	
<i>✓</i>	<i>✓</i>		
<i>✓</i>	<i>✓</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 *None* degrees on *—* course in the case of the standard compass and *✓* degrees on *—* course in the case of the steering compass.

J. P. J. Emerald & Son Builder's Signature Date *Jan. 8. 1896.*

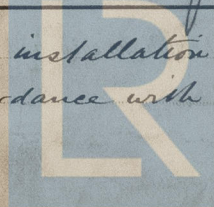
GENERAL REMARKS.

This electric lighting installation has been fitted on board under survey in accordance with the Rules and found satisfactory
Robert Haig

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

Committee's Minute

This installation appears to be in accordance with the Rules



L.M. 13/1/96
Lloyd's Register
Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.