

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 62568

Port of Newcastle Date of First Survey 6th Jun Date of Last Survey 21st Jun 1912 No. of Visits 6
 No. in on the Iron or Steel S.S. "Port Lincoln" Port belonging to London
 Reg. Book 964 Built at Newcastle By whom Hawthorn Leslie & Co. Ltd When built 1912
 Owners Charles Thomas Milburn Owners' Address 130 Leechway St. London E.C.
 Yard No. 452 Electric Light Installation fitted by Jubilee Bros. Co. When fitted 1912

DESCRIPTION OF DYNAMO, ENGINE, ETC.

2. 9 + 6 1/2 Howden enclaved engines coupled direct to
 2. 14.4 Kw 100 Volt dynamo 250 R. P. M.
 Capacity of Dynamo 144 Amperes at 100 Volts, whether continuous or alternating current Continuous
 Where Dynamo fixed Runs above Working Platform Whether single or double wire system is used Double
 Position of Main Switch Board Above Bulkhead near dynamo having switches to groups A. B. C. D. E. F. G. H. I. J. K. L. M. N. lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each 1 + 9, 1 + 6, 2 + 5, 2 + 3 Way in Engine Room, 1 + 4, 1 + 8 Way
in Office Passage, 1 + 3 Way Books Path, 1 + 5 Way Exp. Pass, 1 + 5 Way Steer. Ene. House, 1 + 3, 1 + 8, 1st Plan Pantry
1 + 7 Way Chubroom, 1 + 6 Way Forecastle Passage, 1 + 9, 1 + 7, 2 + 4, 2 + 3 Way in Engine Room desk
 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 25 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 478 + 16 W. + 33 Plugs arranged in the following groups :-

A	Eng. Room	24	lights each of	"	"	20.16	
B	Office	72	lights each of	"	"	40.32	
C	Machinery	80	lights each of	"	"	44.8	Amperes
D	Fore 8 Wps	60	lights each of	"	"	33.6	
E	Exp. Pass	45	lights each of	"	"	23.5	Amperes
F	Books Path	16	lights each of	"	"	8.96	
G	Steer. Ene. House	12	lights each of	"	"	6.72	Amperes
H	1 st Plan	32	lights each of	"	"	17.32	
I	Chubroom	34	lights each of	"	"	19.04	
J	Forecastle	49	lights each of	"	"	27.44	Amperes
K	Exp. Pass	45	lights each of	"	"	15	
L	Fore 8 Wps	60	lights each of	"	"	20	Amperes
M	Books Path	16	lights each of	"	"	1.12	Amperes
N	Exp. Pass	32	lights each of	"	"	1.12	Amperes
2 Mast head light with 1 lamps each of 32 candle power requiring a total current of 1.12 Amperes							
2 Side lights with 1 lamps each of 32 candle power requiring a total current of 1.12 Amperes							
12 Cargo lights of 3 + 32 candle power, whether incandescent or arc lights <u>Incandescent</u>							

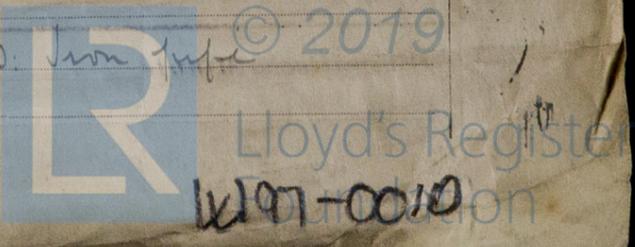
If arc lights, what protection is provided against fire, sparks, &c. None
 Where are the switches controlling the masthead and side lights placed Chubroom

DESCRIPTION OF CABLES.

Main cable carrying 144 Amperes, comprised of 19 wires, each 12 L.S.G. diameter, .159 square inches total sectional area
 Branch cables carrying 44.8 Amperes, comprised of 19 wires, each 17 L.S.G. diameter, .046 square inches total sectional area
 Branch cables carrying 40.32 Amperes, comprised of 19 wires, each 17 L.S.G. diameter, .046 square inches total sectional area
 Leads to lamps carrying .56 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, .0018 square inches total sectional area
 Cargo light cables carrying 3.36 Amperes, comprised of 7 wires, each 2 1/2 L.S.G. diameter, .0048 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Insulated copper, Pure Paraffin, Vuls rubber taped braided & lead covered
 Joints in cables, how made, insulated, and protected As above
 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 None
 How are the cables led through the ship, and how protected R. cable in Galv. Iron tube



DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *Generally*

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

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. *Stuffing boxes*

How are cables carried through decks *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 *Salo. Iron pipe*

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 *P.I. Fittings in Bunkers, Portables in Tween decks*

Where are the main switches and cut outs for these lights fitted *Eng Room*

If in the spaces, how are they specially protected *—*

Are any switches or cut outs fitted in bunkers *No*

Cargo light cables, whether portable or permanently fixed *Portable* How fixed *W.I. socket*

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 *—*

The installation is *—* supplied with a voltmeter and *—* an amperemeter, fixed *on Main Board*

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 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 *600* 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. McConaughy Electrical Engineers Date *June 29, 1912*

COMPASSES.

Distance between dynamo or electric motors and standard compass *140 ft*

Distance between dynamo or electric motors and steering compass *136 "*

The nearest cables to the compasses are as follows:—

A cable carrying <i>12.2</i> Amperes	<i>15</i> feet from standard compass	<i>10</i> feet from steering compass
A cable carrying <i>.56</i> Amperes	<i>1</i> feet from standard compass	<i>1</i> 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 *each* course in the case of the standard compass and *Nil* degrees on *each* course in the case of the steering compass.

R. & W. HAWTHORN, LESLIE & CO. LIMITED

J. W. Bates Builder's Signature. Date *July 2nd 1912*

GENERAL REMARKS.

This installation has been fitted in accordance with the Rules, it has been seen running under full power & in my opinion is eligible to have record of Elec Light. It is submitted that this vessel is eligible for THE RECORD Elec. Light.

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

Committee's Minute



Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.