

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 6340

Port of *Belfast* Date of First Survey *June 5* Date of Last Survey *July 10th* No. of Visits *9*
 No. in Reg. Book *155* on the *Iron or Steel* *Wharfedale* Port belonging to *London*
 Built at *Belfast* By whom *Moriman Clark & Co.* When built *1907*
 Owners *Lysen Line Ltd* Owners' Address *London*
 Yard No. *2470* Electric Light Installation fitted by *H. T. Borthwick & Co. Ltd.* When fitted *1907*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Standard open type dynamo six poles Coupled direct to engine on extended baseplate

Capacity of Dynamo *120* Amperes at *100* Volts, whether continuous or alternating current *continuous*

Where is Dynamo fixed *in engine room top platform*

Position of Main Switch Board *by dynamo* having switches to groups *4* groups of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each *1 section Board in engine room*

1 Board in Saloon

1 Board in Amidships

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 *184* arranged in the following groups:—

A	<i>48</i>	lights each of	<i>16</i>	candle power requiring a total current of	<i>28.8</i>	Amperes
B	<i>57</i>	lights each of	<i>16</i>	candle power requiring a total current of	<i>32.4</i>	Amperes
C	<i>35</i>	lights each of	<i>16</i>	candle power requiring a total current of	<i>21</i>	Amperes
D	<i>50</i>	lights each of	<i>16</i>	candle power requiring a total current of	<i>30</i>	Amperes
E		lights each of		candle power requiring a total current of		Amperes
<i>2</i>	Mast head lights with	<i>1</i> lamps each of	<i>32</i>	candle power requiring a total current of		Amperes
<i>2</i>	Side light with	<i>1</i> lamps each of	<i>32</i>	candle power requiring a total current of		Amperes
<i>5</i>	Cargo lights of		<i>160</i>	candle power, whether incandescent or gas lights		

If are lights, what protection is provided against fire, sparks, &c. *Nil*

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

DESCRIPTION OF CABLES.

Main cable carrying *112* Amperes, comprised of *37* wires, each *12* L.S.G. diameter, *.3105* square inches total sectional area

Branch cables carrying *32.5* Amperes, comprised of *7* wires, each *14* L.S.G. diameter, *.0348* square inches total sectional area

Branch cables carrying *3* Amperes, comprised of *3* wires, each *20* L.S.G. diameter, *.00301* square inches total sectional area

Leads to lamps carrying *3* Amperes, comprised of *3* wires, each *22* L.S.G. diameter, *.00182* square inches total sectional area

Cargo light cables carrying *5* Amperes, comprised of *172* wires, each *38* L.S.G. diameter, *.00372* square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Lead covered cables in accommodation
Tarmoured in Cargo & Machinery spaces
& braided overall

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

Are all the joints of cables thoroughly soldered, resin only having been used as a flux *—* 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 *—*

How are the cables led through the ship, and how protected *where run through beams protected by fibre bushes, & clipped to deck with galv. iron screws*

ADDITIONAL
NEW
DYNAMO
(STEAM
DRIVEN)
FITTED
10/29
Gen. 11076
40 KW
110 VOLTS
920 RPM

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 undiscovered & shielded overall.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat galv. steel armour

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 & armoured

How are cables carried through beams in fibre grommets through bulkheads, &c. in R.T. glands

How are cables carried through decks in steel 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 Yes

If so, how are they protected Galv. wire

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 _____

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 by detachable coupling

In vessels fitted on the ~~light~~ wire system, how is the dynamo terminal fixed to the hull of vessel double wired

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 with an amperemeter, fixed Main Switch Board

The copper used is guaranteed to have a conductivity of 99 per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 2580 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.

H. Y. Boothroyd, Ayrleop & Co Electrical Engineers Date July 26th 1907

COMPASSES.

Distance between dynamo or electric motors and standard compass 130 ft approx.

Distance between dynamo or electric motors and steering compass 135 "

The nearest cables to the compasses are as follows:—

A cable carrying <u>2</u> Amperes	<u>6</u> feet from standard compass	<u>8</u> feet from steering compass
A cable carrying <u> </u> Amperes	<u> </u> feet from standard compass	<u> </u> feet from steering compass
A cable carrying <u> </u> Amperes	<u> </u> feet from standard compass	<u> </u> 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 all courses in the case of the standard compass and nil degrees on all courses in the case of the steering compass.

PRO WORKMAN, CLARK & CO., LIMITED,

Builder's Signature. Date 1/8/07

GENERAL REMARKS.

This installation appears to be of good description, and has been fitted in accordance with the Rules.

R. J. Pennington

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

Committee's Minute

It is submitted that the Record Elec. Light be noted in the Reg. Book

Lloyd's Register Foundation

6.8.07

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.