

7. E. Bel 5753

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 5771

Port of Belfast Date of First Survey 21/4/04 Date of Last Survey 21/6/04 No. of Visits 15
 No. in on the ~~Iron~~ Steel S.S. "Parana" Port belonging to Belfast
 Reg. Book Built at Belfast By whom Workman & Co Ltd When built 1904
 Owners Royal Mail Steam Packet Co Ltd Owners' Address London
 Yard No. 207 Electric Light Installation fitted by W. H. Allen, Son & Co, Ltd When fitted 1904

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Engine having cylinder 7" diam, x 6" stroke
 Dynamo 4 pole
 Capacity of Dynamo 80 Amperes at 110 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed starting platform in Engine Room Starboard side
 Position of Main Switch Board on bulkhead of 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 —

If cut outs are fitted on ~~main~~ switch board to the cables of main circuit no and on each auxiliary ^{fuse} 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 100 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 101 arranged in the following groups:—
 A 36 accommodation lights each of 16 candle power requiring a total current of 19.5 Amperes
 B 12 fore-castle lights each of 16 candle power requiring a total current of 6.5 Amperes
 C 33 machinery space lights each of 16 candle power requiring a total current of 18.0 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
2 Mast head lights with 1 lamp each of 32 candle power requiring a total current of 2.2 Amperes
2 Side lights with 1 lamp each of 32 candle power requiring a total current of 2.2 Amperes
2 Cargo ~~lights~~ Clusters of 8 - 16 candle power, whether incandescent or arc lights incandescent

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

Where are the switches controlling the masthead and side lights placed in Wheel house

DESCRIPTION OF CABLES.

Main cable carrying 180 Amperes, comprised of 19 wires, each 15 L.S.G. diameter, .079 square inches total sectional area
 Branch cables carrying 23 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .0229 square inches total sectional area
 " 7 " " 20 " " .0073 " " " "
 Branch cables carrying 13 Amperes, comprised of 7 wires, each 18 L.S.G. diameter, .0129 square inches total sectional area
 Leads to lamps carrying 3 Amperes, comprised of 1 wires, each 16 L.S.G. diameter, .0032 square inches total sectional area
 Cargo light cables carrying 4.3 Amperes, comprised of 14.5 wires, each 38 L.S.G. diameter, .0042 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

2500 megohm quality
Pure Para rubber, 2 layers vulcanizing rubber, layer S.R. proofed tape
The whole vulcanized together, then braided & compounded

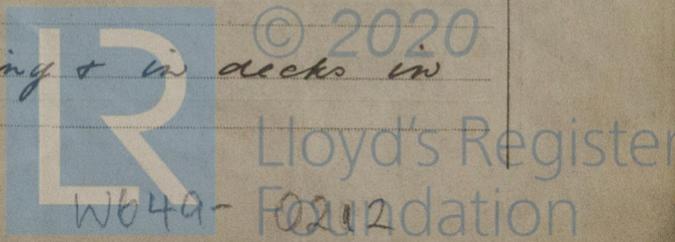
Joints in cables, how made, insulated, and protected

Thoroughly soldered, wrapped with 2 layers rubber tape & 2 layers of black 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 & in decks in wrought iron pipes



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 W. J. pipes

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat none near undue heat

What special protection has been provided for the cables near boiler casings spirally armoured with G.I. wire

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

How are cables carried through beams in fibre ferrules through bulkheads, &c. in fibre ferrules

How are cables carried through decks in W. J. pipes standing 10" above the deck

Are any cables run through coal bunkers no or cargo spaces yes or spaces which may be used for carrying cargo, stores, or baggage yes

If so, how are they protected strong wood casing

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 —

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

60 double Wired

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 on main switch board

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 2500 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.

P. H. Hunter

Electrical Engineers

Date

28/7/04

COMPASSES.

Distance between dynamo or electric motors and standard compass 100 feet

Distance between dynamo or electric motors and steering compass 96 feet

The nearest cables to the compasses are as follows:—

A cable carrying	<u>25</u>	Amperes	<u>28</u>	feet from standard compass	<u>22</u>	feet from steering compass
A cable carrying	<u>7</u>	Amperes	<u>46</u>	feet from standard compass	<u>40</u>	feet from steering compass
A cable carrying	<u>8.8</u>	Amperes	<u>46</u>	feet from standard compass	<u>40</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 every course in the case of the standard compass and nil degrees on every course in the case of the steering compass.

THE WORKMAN, CLARK & CO., LIMITED,

Builder's Signature.

Date

14 August 1904

GENERAL REMARKS.

This installation is of good description throughout, and has been fitted in accordance with the Rules.

R. J. Dewidge

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

Committee's Minute

It is submitted that this installation appears to be satisfactory

R. J. Dewidge

14.8.04

Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 14.