

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 69647

Port of Newcastle Date of First Survey 3rd Jan Date of Last Survey 3rd Jan 17 No. of Visits 8
 No. in Reg. Book 587 on the Iron or Steel S.S. "Medonsley" Port belonging to Newcastle
 Built at Blyth By whom Blyth S B Co Ltd When built 1906-2
 Owners Formalby Steam Shipping Co Ltd Owners' Address _____
 Yard No. _____ Electric Light Installation fitted by J.H. Holmes & Co When fitted 1916-4

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One 6 1/2" x 6" open single cylinder "Robey" engine coupled to one Holmes dynamo.

Capacity of Dynamo 110 Amperes at 100 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Starboard side of Engine Room Whether single or double wire system is used double

Position of Main Switch Board near dynamo having switches to groups A, B, C, D of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each 1-4 way 5 amp fusebox in Capt's Forward, 6 way fusebox in aft Accom, 6 way fusebox in Wheel-house with switches, 6 way near main switchboard with switches, 3 way at top of Engine Room, 4 way fusebox with switches at top of Engine Room, 1-3 way section box in Chart Rm.

If fuses 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 fuses fitted to both flow and return wires or cables of all circuits including lamp circuits yes

Are the fuses of non-oxidizable metal yes and constructed to fuse at an excess of 100 per cent over the normal current

Are all fuses 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 fuses constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 93-166P, 5-326P arranged in the following groups:—

A	<u>9</u> lights each of <u>16</u> candle power requiring a total current of <u>5.04</u> Amperes
B	<u>16</u> lights each of <u>16</u> candle power requiring a total current of <u>10.08</u> Amperes
C	<u>4</u> lights each of <u>16</u> candle power requiring a total current of <u>8.4</u> Amperes
D	<u>19</u> lights each of <u>16</u> candle power requiring a total current of <u>10.64</u> Amperes
E	lights each of _____ candle power requiring a total current of _____ Amperes
<u>2</u> Mast head light with <u>1</u> lamp each of <u>32</u> candle power requiring a total current of <u>2.24</u> Amperes	
<u>2</u> Side light with <u>1</u> lamp each of <u>32</u> candle power requiring a total current of <u>2.24</u> Amperes	
<u>4</u> Cargo lights of <u>8 x 16</u> candle power, whether incandescent or arc lights <u>incandescent</u>	

If arc 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 110 Amperes, comprised of 19 wires, each 14 S.W.G. diameter, .094 square inches total sectional area

Branch cables carrying 5.04 Amperes, comprised of 4 wires, each 21 S.W.G. diameter, .0055 square inches total sectional area

Branch cables carrying 10.08 Amperes, comprised of 4 wires, each 18 S.W.G. diameter, .012 square inches total sectional area

Leads to lamps carrying .56 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0018 square inches total sectional area

Cargo light cables carrying 4.48 Amperes, comprised of 4 wires, each 2 1/2 S.W.G. diameter, .005 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

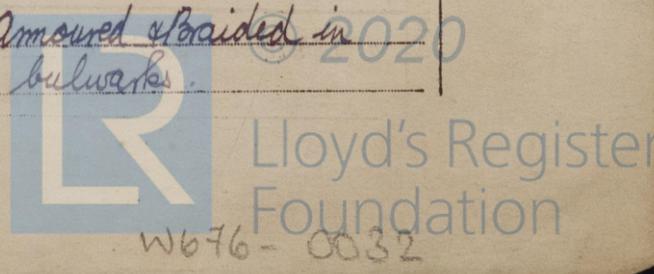
Conductors of best quality copper, insulated with pure vulcanized India Rubber, taped, braided & compounded, armoured with steel wire braid & compounded overall.

Joints in cables, how made, insulated, and protected none, looping-in system carried out, or special connection boxes used.

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances ✓ 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 Lead Covered in Accommodation, Armoured & Braided in Engine & Boiler Spaces, V.G.R. in iron pipes in Tween Decks & along bulwarks.



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 U.S.R. in iron pipes.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Armoured & Braided.

What special protection has been provided for the cables near boiler casings Armoured & Braided.

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

How are cables carried through beams bushed with fibre. through bulkheads, &c. stuffing glands.

How are cables carried through decks in lead or iron deck tubes flanged & made watertight.

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 U.S.R. in Iron Pipes.

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 fuses for these lights fitted

If in the spaces, how are they specially protected

Are any switches or fuses fitted in bunkers no

Cargo light cables, whether portable or permanently fixed Portable. How fixed socket connection.

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

Is the installation supplied with a voltmeter yes. and with an amperemeter yes. fixed on main board.

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and fuses fitted in positions not liable to the accumulation of petroleum vapour or gas

Are any switches, fuses, 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 not less than that of the Engineering Standards Committee's standard, and the wires are protected by tinning from the sulphur compounds present in the insulating material.

Insulation of cables is guaranteed to have a resistance of not less than 600 megohms per statute mile at 60° Fahrenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than 500 volts and while the cable is still immersed.

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. Jones, Co. Electrical Engineers Date Feb 13/17.

COMPASSES.

Distance between dynamo or electric motors and standard compass Approx. 45 ft.

Distance between dynamo or electric motors and steering compass " 40 ft.

The nearest cables to the compasses are as follows:—

A cable carrying	<u>5.6</u>	Ampere	<u>inside</u>	feet from standard compass	<u>5</u>	feet from steering compass
A cable carrying	<u>8.4</u>	Ampere	<u>approx 4</u>	feet from standard compass	<u>5</u>	feet from steering compass
A cable carrying	<u>25.04</u>	Ampere	<u>" 13</u>	feet from standard compass	<u>8</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 — course in the case of the standard compass and — degrees on — course in the case of the steering compass.

B. J. Marshall Superintendent Engineer Date Feb 16th 1917
 Builder's Signature.

GENERAL REMARKS.

One pair of 4/18 U.S.R. wires in iron pipe, run to Marconi Room, with control switch in lock up box.

This electric lighting installation has been fitted in accordance with the rules and satisfactorily tested with all lights on.

George Hurdock
 Surveyor to Lloyd's Register of Shipping.

J.W.D. 26/2/17.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

