

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 9117

Port of Belfast Date of First Survey Apr 11th Date of Last Survey May 7th No. of Visits 6
 No. in Reg. Book 18 on the ~~Iron~~ Steel S.S. "Arlington Court" Port belonging to London
 Built at Belfast By whom Workman Clark & Co Ltd When built 1924
 Owners' Address Count Line Ltd When fitted 1924
 Port No. 469 Electric Light Installation fitted by Sunderland Forge & Eng Co Ltd

DESCRIPTION OF DYNAMO, ENGINE, ETC.

1-15 K.W. Open Type Compound Wound Multipolar Dynamo, direct coupled to open type
 Steam Engine with governor on crank shaft.
 Capacity of Dynamo 136 Amperes at 110 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed In Main Engine Room Whether single or double wire system is used Double
 Position of Main Switch Board In Main Engine Room having switches to groups 6 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Steering Gear Compartment - 4 switches
Saloon Accom. - 4 switches

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 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 136 arranged in the following groups:—
 A Saloon & Navig. 43 lights each of 32 candle power requiring a total current of 17.5 Amperes
 B Engrs. & Officers 30 lights each of 16 candle power requiring a total current of 8.9 Amperes
 C Eng. & Boiler Rms. 30 lights each of 16 candle power requiring a total current of 15.3 Amperes
 D Cargo Clusters 48 lights each of 16 candle power requiring a total current of 24.4 Amperes
 E Wireless lights each of ✓ candle power requiring a total current of 15.0 Amperes
 F Projector lights each of ✓ candle power requiring a total current of 40.0 Amperes
2 Mast head light with 2 lamps each of 32 candle power requiring a total current of 2 Amperes
2 Side light with 2 lamps each of 32 candle power requiring a total current of 2 Amperes
48 Cargo lights of 16 candle power, whether incandescent or arc lights Incandescent

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

Where are the switches controlling the masthead and side lights placed Wheel House ✓

DESCRIPTION OF CABLES.

Main cable carrying 136 Amperes, comprised of 37 wires, each .093 L.S.G. diameter, .25 square inches total sectional area
 Branch cables carrying 24.4 Amperes, comprised of 19 wires, each .052 L.S.G. diameter, .04 square inches total sectional area
 Branch cables carrying 8.9 Amperes, comprised of 7 wires, each .064 L.S.G. diameter, .0225 square inches total sectional area
 Leads to lamps carrying 1.1 Amperes, comprised of 3 wires, each .029 L.S.G. diameter, .002 square inches total sectional area
 Cargo light cables carrying 3 Amperes, comprised of 70 wires, each .0076 L.S.G. diameter, .003 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Tinned Copper Conductors insulated with pure & vulcanised india rubber, taped, braided & the whole vulcanised together & finished.
In Accommodation. Lead Covered & Braided
In Machinery Spaces. Lead Covered, Armoured & Braided.

Joints in cables, how made, insulated, and protected —

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 Lead Covered & Braided run on Wood Grounds in Accom.
Lead Covered Armoured & braided run on Steel Plating in Cargo Spaces

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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 Lead Covered

Armoured & Braided

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

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

What special protection has been provided for the cables in engine room Lead Covered Armoured & Braided

How are cables carried through beams Holes bushed with Fibre through bulkheads, &c. W.T. Backing Glands

How are cables carried through decks Deck Tubes 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 Cables run in Galvanised Wrought Iron Pipe

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage —

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 —

Cargo light cables, whether portable or permanently fixed Portable How fixed W.T. Connection Boxes

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 Switchboard

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.

P. J. Thompson Electrical Engineers

Date 12th May 1924

COMPASSES.

Distance between dynamo or electric motors and standard compass 100 ft.

Distance between dynamo or electric motors and steering compass 100 ft.

The nearest cables to the compasses are as follows:—

Cable	Amperes	feet from standard compass	feet from steering compass
A cable carrying <u>5.5</u>	<u>8</u>	<u>6</u>	<u>6</u>
A cable carrying <u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
A cable carrying <u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>

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 no degrees on all course in the case of the standard compass and no degrees on all course in the case of the steering compass.

PRO WORKMAN, CLARK & CO., LIMITED,

Builder's Signature. Date

GENERAL REMARKS.

This installation is well fitted in accordance with the Rules, & ran satisfactorily on trials under full load.

THE RECORD

See in Entry No. 1000

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

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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