

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 7659

Port of Belfast Date of First Survey 18 Dec Date of Last Survey 10th Feb No. of Visits 5  
 No. in Reg. Book on the Iron or Steel S.S. ALTO Port belonging to Newcastle on Tyne  
 Built at Londonderry By whom North of Ireland S. Co Ltd 1916  
 Owners Pelton Steamship Co Limited Owners' Address Milburn House, Newcastle on Tyne  
 Yard No. 64 Electric Light Installation fitted by Campbell & Isherwood When fitted 1916

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Campbell & Isherwood, 4 pole compound wound, Reley Engine  
 Capacity of Dynamo 91 Amperes at 110 Volts, whether continuous or alternating current continuous  
 Where is Dynamo fixed Starboard side, Engine Room Whether single or double wire system is used Double  
 Position of Main Switch Board aft, Bulkhead Engine Room Dividing switches to groups 4 of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each Chartroom, Engine Room, 5, & a  
switch in a convenient position for each light.

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 75 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 66 of 16, 30 of 32 arranged in the following groups:—  
 A Engine room lights each of 30 of 16, 13 of 32 candle power requiring a total current of 80.8 Amperes  
 B Masthead lights each of 20 of 16, 17 of 32 candle power requiring a total current of 29.4 Amperes  
 C Engine room lights each of 16 of 16 candle power requiring a total current of 8.8 Amperes  
 D lights each of candle power requiring a total current of 15.0 Amperes  
 E lights each of candle power requiring a total current of Amperes  
 2 Mast head light with 1 lamps each of 32 candle power requiring a total current of included in B Amperes  
 2 Side light with 1 lamps each of 32 candle power requiring a total current of included in B Amperes  
 4 Cargo lights of 6 of 16, 32 candle power, whether incandescent or arc lights incandescent

If arc lights, what protection is provided against fire, sparks, &c. none fitted

Where are the switches controlling the masthead and side lights placed Chartroom

## DESCRIPTION OF CABLES.

Main cable carrying 81.3 Amperes, comprised of 19 wires, each 15 L.S.G. diameter, .045 square inches total sectional area  
 Branch cables carrying 30.8 Amperes, comprised of 4 wires, each 18 L.S.G. diameter, .0125 square inches total sectional area  
 Branch cables carrying 29.4 Amperes, comprised of 4 wires, each 18 L.S.G. diameter, .0125 square inches total sectional area  
 Leads to lamps carrying 3.3 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, .0018 square inches total sectional area  
 Cargo light cables carrying 3.3 Amperes, comprised of 110 wires, each 38 L.S.G. diameter, square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Accommodation lead covered, holds, U. S. B. in section Yuffe  
Engine room Armoured & Braided, all rubber insulation Rubber  
& tapes.  
 Joints in cables, how made, insulated, and protected None made

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 Accommodation lead covered, holds, U. S. B. in section Yuffe, Engine room, Armoured & braided



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 se. gal. iron pipe

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 Armoured & braided

How are cables carried through beams fibre spessules through bulkheads, &c. glands

How are cables carried through decks neck pipes, flanged to 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 se. gal. iron pipe

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 \_\_\_\_\_

Cargo light cables, whether portable or permanently fixed portable How fixed special socket in East End case

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 also supplied with a voltmeter and with an amperemeter, fixed 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 1000 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.

CAMPBELL & LEBERWOOD L.L.D.

Thos Meade

Electrical Engineers

Date 19th April 1916

COMPASSES.

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

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

The nearest cables to the compasses are as follows:—

A cable carrying	<u>.55</u>	Amperes	<u>1</u>	feet from standard compass	<u>1</u>	feet from steering compass
A cable carrying	<u>1.1</u>	Amperes	<u>6</u>	feet from standard compass	<u>6</u>	feet from steering compass
A cable carrying	<u>28.6</u>	Amperes	<u>20</u>	feet from standard compass	<u>15</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 course in the case of the standard compass and Nil degrees on all course in the case of the steering compass.

THE NORTH OF IRELAND SHIPBUILDING Co. Ltd.

A. J. Fletcher

Secretary.

Builder's Signature.

Date April 25th 1915

GENERAL REMARKS.

fitted in accordance with the Rules, and as of former description.

It is admitted that this vessel is eligible for

THE RECORD. Elec. light.

JWD 2/5/16

R. J. Beveridge

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

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 13.—5m.g.d.



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