

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 57166

Port of Newcastle Date of First Survey 20<sup>th</sup> July Date of Last Survey 6<sup>th</sup> Aug No. of Visits 6  
No. in Reg. Book on the Iron or Steel S.S. "Annaberg" Port belonging to Newcastle-on-Tyne  
Built at How Walker By whom Messrs Swan Hunter Wiggin & Richardson When built 1909  
Owners — do — Owners' Address — do —  
Yard No. 814 Electric Light Installation fitted by Messrs J. H. Holmes & Co N/C When fitted 1909

### DESCRIPTION OF DYNAMO, ENGINE, ETC.

One 5" and 8 $\frac{3}{4}$ " x 5", Foster, compound vertical Steam engine, to work at 180 lbs pressure, coupled to, one 13 $\frac{1}{2}$ " A Compound wound dynamo, 375 Revs.

Capacity of Dynamo 75. Amperes at 100 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Starting Platform Whether single or double wire system is used D. W. S.

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 6 way fuseboard in engine room, 6 way - do - in mess room, 3 way - do - in Eng<sup>rs</sup> Bathroom, 4 way - do - in Steering Gear recess, 3 way - do - in 1<sup>st</sup> Class Pantry, 6 - do - in Whirlouse, 3 and 4 way in 1<sup>st</sup> Class accom<sup>ts</sup>, 6 way in 1<sup>st</sup> Class Pantry.

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 25 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

Yes are permanent instructions fitted on or near each switch board giving particulars of proper size of fuse for each circuit

Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases

Total number of lights provided for 108 arranged in the following groups :—

A Incandescent 28. lights of 24-16-and 4-32 candle power requiring a total current of 17.9 Amperes

B Engines *Eng<sup>rs</sup>* 40.0 lights each of 16 candle power requiring a total current of 22.4. Amperes

Forward Cargo 24 lights each of 32 candle power requiring a total current of 26.8 Amperes

□ alt. lamps 16. lights each of 32 candle power requiring a total current of 17.9 Amperes

E lights each of candle power requiring a total current of Amperes

2 Mast head light<sup>ea</sup> with 1 lamp of 32 candle power requiring a total current of 1.12 Amperes

2 Side light<sup>ea</sup> with 1 lamp ~~each~~ of 32 candle power requiring a total current of 1.12 Amperes

5 Cargo lights of 6 x 32 candle power, whether incandescent or are lights Incandescent.

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

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

## DESCRIPTION OF CABLES.

Main cable carrying 75 Amperes, comprised of 19 wires, each 15 L.S.G. diameter, 0.065 square inches total sectional area

Branch cables carrying 26.8 Amperes, comprised of 7 wires, each 15 L.S.G. diameter, .0282 square inches total sectional area

Branch cables carrying 22.4 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .0223 square inches total sectional area

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

Cargo light cables carrying 67 Amperes, comprised of 7 wires, each 20 L.S.G. diameter, .0072 square inches total sectional area

### DESCRIPTION OF INSULATION, PROTECTION, ETC.

Wired copper, Pure para rubber, Vulc<sup>d</sup> I.R., taped & Braided  
Lead covered in cabins & Armoured in Engine Room and  
in pipes on Deck

*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 Armoured in galv-iron pipes along deck



**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 Armoured

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

What special protection has been provided for the cables near boiler casings — do —

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

How are cables carried through beams Fibre Baskets through bulkheads, &c. Stuffing Glands

How are cables carried through decks 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 no

If so, how are they protected

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 W. I. Sockets

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 also an amperemeter, fixed on Main Svc. Bd

**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 Ω 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. J. Hobbs & Co. Electrical Engineers Date 13/8/09

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 110 ft

Distance between dynamo or electric motors and steering compass 146 ft

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>8.4</u>	<u>8</u>	<u>8</u>	<u>8</u>
<u>.56</u>	<u>14</u>	<u>14</u>	<u>14</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.

J. M. Hunter & Wigham Richardson, Ltd. Builder's Signature. Date 18th August 1909

**GENERAL REMARKS.**

This electric light installation has been satisfactorily fitted on board & tested and is eligible in my opinion to have the record Electric Light recorded in the Register Book.

R. W. Coomber 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.—9m.34.