

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 56733

Port of Newcastle Date of First Survey 22 Apr Date of Last Survey 17 May 1909 No. of Visits 6
 No. in on the Iron or Steel SS San Antonio Port belonging to London
 Reg. Book Built at Wallsend on Tyne By whom Swan Hunter & Wigham Richardson When built 1909
 Owners S. Pearson & Co. Owners' Address London
 Yard No. 833 Electric Light Installation fitted by Swan Hunter & Wigham Richardson When fitted 1909

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Inverted direct acting engine coupled direct to Dynamo
 Capacity of Dynamo 80 Amperes at 100 Volts, whether continuous or alternating current Continuous ✓
 Where is Dynamo fixed in Engine Room Starboard Whether single or double wire system is used Double ✓
 Position of Main Switch Board " having switches to groups 3 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Chart room for navigation
Engine Room &c accommodation switches in rooms
 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 cessel 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 10 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 110 arranged in the following groups :—
 A Forward Cargo lights each of 41 lights 16 candle power requiring a total current of 20.5 Amperes
 B Midship & Navig lights each of 31 " 16 candle power requiring a total current of 15.5 Amperes
 C Engine Room & aft lights each of 38 16 candle power requiring a total current of 19 Amperes
 D lights each of 16 candle power requiring a total current of 19 Amperes
 E lights each of 16 candle power requiring a total current of 19 Amperes
2 Mast head light with 1 lamp each of 32 candle power requiring a total current of 1.2 Amperes
2 Side light with 1 lamp each of 32 candle power requiring a total current of 1.2 Amperes
2 clusters Cargo lights of 6 light each 16 candle power, whether incandescent or ~~are lights~~ incandescent
 If are lights, what protection is provided against fire, sparks, &c. no an light
 Where are the switches controlling the masthead and side lights placed Wheel house on Bridge

DESCRIPTION OF CABLES.

Main cable carrying 60.4 Amperes, comprised of 19 wires, each 16 L.S.G. diameter, .06600 square inches total sectional area
 Branch cables carrying 22.3 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .02214 square inches total sectional area
 Branch cables carrying 17.0 Amperes, comprised of 7 wires, each 17 L.S.G. diameter, .01695 square inches total sectional area
 Leads to lamps carrying 1.8 Amperes, comprised of 3 wires, each 22 L.S.G. diameter, .00182 square inches total sectional area
 Cargo light cables carrying 4 Amperes, comprised of 108 wires, each 38 L.S.G. diameter, .00501 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Steel wire galvanized armour. Lead covering braiding
taping vulcanized & pure India Rubber

Joints in cables, how made, insulated, and protected No joints

Are all the joints of cables thoroughly soldered, resin only having been used as a flux None 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 None

Are there any joints in or branches from the cable leading from dynamo to main switch board None

How are the cables led through the ship, and how protected In after bunker in heavy iron piping

DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *Piping for main cable laid long starboard bulwark* ✓
 What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *Armour & lead covering* ✓
 What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Armour & lead covering* ✓
 What special protection has been provided for the cables near boiler casings *Asbestos vulcanized & Rubber in iron pipes* ✓
 What special protection has been provided for the cables in engine room *Armour & Lead in iron piping* ✓
 How are cables carried through beams *fiber bushes* through bulkheads, &c. *Only where piping* ✓
 How are cables carried through decks *Iron or lead deck tubes not less than 18" above deck* ✓
 Are any cables run through coal bunkers *yes* or cargo spaces *no* or spaces which may be used for carrying cargo, stores, or baggage *no* ✓
 If so, how are they protected *Heavy iron piping galvanized* ✓
 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 *In Cast Iron Boxes* ✓
 Where are the main switches and cut outs for these lights fitted *in Engine Rm & Bridge* ✓
 If in the spaces, how are they specially protected *62 Boxes* ✓
 Are any switches ~~not~~ fitted in bunkers *yes in 62 Boxes water tight* ✓
 Cargo light cables, whether portable or permanently fixed *portable* How fixed *water tight socket in 62 Box* ✓
 In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *Double wire* ✓
 How are the returns from the lamps connected to the hull *none* ✓
 Are all the joints with the hull in accessible positions *11* ✓
 The installation is *Ammeter* supplied with a voltmeter and *volt-meters* an amperemeter, fixed *on 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 *yes* ✓
 Are any switches, cut outs, or joints of cables fitted in the pump room or companion *none* ✓
 How are the lamps specially protected in places liable to the accumulation of vapour or gas *Brass Guard globe with 2 Rings* ✓

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.

SWAN, HUNTER, & WIGHAM RICHARDSON, LD.

J. J. Culley Secretary

Electrical Engineers

Date *14/7/09.*

COMPASSES.

Distance between dynamo or electric motors and standard compass *200 ft.*
 Distance between dynamo or electric motors and steering compass *190*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>.5</i>	<i>10</i>	<i>10</i>	
<i>.5</i>	<i>10</i>	<i>10</i>	
<i>.5</i>	<i>10</i>	<i>10</i>	

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 *any* course in the case of the standard compass and *any* course in the case of the steering compass.

SWAN, HUNTER, & WIGHAM RICHARDSON, LD.

J. J. Culley Secretary

Builder's Signature.

Date *14 July 1909*

GENERAL REMARKS.

This installation has been fitted on board in accordance with the rules and in a satisfactory manner.

It is submitted that this vessel is eligible for the notation — elec light J. Robinson.

APR 25-7-09 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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