

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 4982

Port of Aburdeen Date of First Survey June 5th Date of Last Survey July 12th No. of Visits 8
 No. in Reg. Book 574 on the Iron ~~or Steel~~ S.S. Saint-Clair Port belonging to Aburdeen
 Built at Glasgow By whom Randolph Blair & Co When built 1868
 Owners R. of Scotland Oil & Shell Shk Owners Address -
 Yard No. ✓ Electric Light Installation fitted by Prof. W. C. Martin & Co When fitted 1895

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Lanzy's vertical Engine one cylinder
Woodside Dynamo
 Capacity of Dynamo 90 Amperes at 100 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed on the Port side of the Engine Room Platform
 Position of Main Switch Board on aft end of Rudder Post table having switches to groups 4 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each
Fitted on the Distributing Box Principle
 If cut outs are fitted on main switch board to the cables of main circuit yes and on each auxiliary switch boards 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 50 per cent over the normal current
 Are all cut outs fitted in easily accessible positions yes Are the fuses of standard dimensions ✓ 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 63 ~~not counting mast & side lights~~ arranged in the following groups :-
 A Saloon 24 lights each of 21 ^{3 of 32} candle power requiring a total current of 15 Amperes
 B Officers Quarters 18 lights each of 16 candle power requiring a total current of 7 Amperes
 C Hold 8 lights each of 16 candle power requiring a total current of 5 Amperes
 D Engine Room 13 lights each of 16 candle power requiring a total current of 6 1/2 Amperes
 E lights each of double filament candle power requiring a total current of Amperes
Mast head light with one lamp each of 32 candle power requiring a total current of 1.2 Amperes
Two Side light with one lamp each of 32 candle power requiring a total current of 1.2 Amperes
Two Cargo lights of 64 candle power, whether incandescent or arc lights Incandescent
 If arc lights, what protection is provided against fire, sparks, &c. No arc lights - fitted
 Where are the switches controlling the masthead and side lights placed on the Bridge and fitted with patent Indicators.

DESCRIPTION OF CABLES.

Main cable carrying Amperes, comprised of 19 wires, each 16 L.S.G. diameter, square inches total sectional area
 Branch cables carrying 15 Amperes, comprised of 7 wires, each 18 L.S.G. diameter, square inches total sectional area
 Branch cables carrying 7 Amperes, comprised of 7 wires, each 20 L.S.G. diameter, square inches total sectional area
 Leads to lamps carrying 64 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, square inches total sectional area
 Cargo light cables carrying - Amperes, comprised of - wires, each - L.S.G. diameter, square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Vulcanized India Rubber and Braiding
 Joints in cables, how made, insulated, and protected soldered with resin as a flux and insulated with pure rubber strip & prepared tape
 Are all the joints of cables thoroughly soldered, resin only having been used as a flux yes 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 yes
 Are there any joints in or branches from the cable leading from dynamo to main switch board no
 How are the cables led through the ship, and how protected Armoured cables in heavy casing.

ABN24-0105



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 *Protected by armoured cable*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Protected as above*

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 *do* through bulkheads, &c. *do*

How are cables carried through decks *Watertight - deck tubes*

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 *By armoured cable*

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

If so, how are the lamp fittings and cable terminals specially protected *Cast Iron cones*

Where are the main switches and cut outs for these lights fitted *In the Engine Room*

If in the spaces, how are they specially protected *-*

Are any switches or cut outs fitted in bunkers *No*

Cargo light cables, whether portable or permanently fixed *Permanently fixed* How fixed *by Iron tubes*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *Fitted on the double wire system*

How are the returns from the lamps connected to the hull *✓*

Are all the joints with the hull in accessible positions *✓*

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 installation is supplied with a voltmeter and an amperemeter, fixed~~

The copper used is guaranteed to have a conductivity of *98* per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than *1200* 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.

W. C. Martin & Co Electrical Engineers Date *July 12th 1895*
342 Argyle St Glasgow.

COMPASSES.

Distance between dynamo or electric motors and standard compass *50 feet*

Distance between dynamo or electric motors and steering compass *50 "*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>3</i>	Amperes	<i>8</i>	feet from standard compass	<i>8</i>	feet from steering compass
A cable carrying	<i>1 1/2</i>	Amperes	<i>6</i>	feet from standard compass	<i>6</i>	feet from steering compass
A cable carrying	<i>-</i>	Amperes	<i>✓</i>	feet from standard compass	<i>-</i>	feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power *No*

The maximum deviation due to electric currents, etc., was found to be *Nil* degrees on *Nil* course in the case of the standard compass and *Nil* degrees on *Nil* course in the case of the steering compass.

Hall Russell & Co. Builder's Signature Date *3rd Aug 1895*

GENERAL REMARKS. *The Electric Lighting Installation on this vessel was formerly on the single wire system and has now been reconstructed on the double wire plan. The workmanship etc appears to conform to the requirements of the rules.*

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

Committee's Minute

REPORT FORM No. 13.

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

