

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 12657.

Port of Leith Date of First Survey 11th Feb Date of Last Survey 15th Feb '09 No. of Visits 2
 No. in Reg. Book SV 21 on the Iron or Steel s/s. " Oder " Port belonging to Leith
 Built at Leith By whom Ramage & Ferguson Ltd. When built 1909
 Owners James Currie & Co. Owners' Address Leith
 Yard No. 216 Electric Light Installation fitted by King & Co. When fitted 1909

DESCRIPTION OF DYNAMO, ENGINE, ETC.

vertical high speed engine by Ramsay, Sims & Jeffries, 6 1/2" x 6" Coupled direct
to Kuper's multipolar compound wound dynamo
 Capacity of Dynamo Sixty Amperes at 100 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed on a steel plate in engine room Whether single or double wire system is used Single
 Position of Main Switch Board behind dynamo having switches to groups four of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each (1) Aft in saloon passage
(2) In engine room (3) Midships in chartroom (4) Forward in forecabin
 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 No
 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
 Are the cut outs of non-oxidizable metal Yes and constructed to fuse at an excess of about 50 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 79 arranged in the following groups:—
 A (1) 13 lights each of 16 candle power requiring a total current of 18 Amperes
 B (2) 23 lights each of 16 candle power requiring a total current of 14 Amperes
 C (3) 4 lights each of 16 candle power requiring a total current of 10 Amperes
 D 10 lights each of 16 candle power requiring a total current of 16 Amperes
 E lights each of candle power requiring a total current of Amperes
2 Mast head light with 2 lamps, each of 32 candle power requiring a total current of 1.2 Amperes
2 Side light with 2 lamps, each of 32 candle power requiring a total current of 1.2 Amperes
3 Cargo lights of 192 candle power, whether incandescent or arc lights incandescent
6 If arc lights, what protection is provided against fire, sparks, &c. No arcs

Where are the switches controlling the masthead and side lights placed in chartroom

DESCRIPTION OF CABLES.

Main cable carrying 60 Amperes, comprised of 19 wires, each 16 L.S.G. diameter, .060 square inches total sectional area
 Branch cables carrying 18 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .022 square inches total sectional area
 Branch cables carrying Amperes, comprised of wires, each L.S.G. diameter, square inches total sectional area
 Leads to lamps carrying 5 Amperes, comprised of 7 wires, each 21 1/2 L.S.G. diameter, .005 square inches total sectional area
 Cargo light cables carrying 5 Amperes, comprised of 178 wires, each 38 L.S.G. diameter, .005 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Pure + vulcanized rubber. Taped, braided + compounded
 Joints in cables, how made, insulated, and protected soldered, taped, pure rubber, rubber solution
+ waterproof 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 in screwed tubing except in accommodation where they are in grooved casing

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 in pipes

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

What special protection has been provided for the cables near boiler casings in pipes

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

How are cables carried through beams in pipes or bushed holes through bulkheads, &c. in pipes

How are cables carried through decks in pipes

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 in pipes

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 no

Cargo light cables, whether portable or permanently fixed portable How fixed —

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel brass socket fixed with bolt

How are the returns from the lamps connected to the hull brass earth screws

Are all the joints with the hull in accessible positions yes

The installation is yes supplied with a voltmeter and no an amperemeter, fixed on 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 2500 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.

K. A. G. C.

Electrical Engineers

Date 18th March 09

COMPASSES.

Distance between dynamo or electric motors and standard compass 60 ft

Distance between dynamo or electric motors and steering compass 60 ft

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>16</u>	<u>20</u>	<u>20</u>	<u>—</u>
<u>✓</u>	<u>✓</u>	<u>—</u>	<u>—</u>
<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 Nil degrees on — course in the case of the standard compass and Nil degrees on — course in the case of the steering compass.

Ramage & Ferguson Ltd
Alex. J. Ferguson

Builder's Signature.

Date May 14th 1909

GENERAL REMARKS.

This installation appears to have been fitted in a satisfactory manner and in accordance with the rules.

G. A. H. M.

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

Committee's Minute —

It is submitted that the Record Rec. might be noted in the Reg. Books.