

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 25699

Port of Glasgow Date of First Survey July 1906 Date of Last Survey 22nd Aug 1907 No. of Visits 2
 No. in Reg. Book on the Iron or Steel Turbin Steamer Cousilamin Port belonging to Liverpool
 Built at Glydebank By whom Messrs John Brown & Co. Limited When built 1907
 Owners Cunard Steamship Company Owners' Address Liverpool
 Yard No. 367 Electric Light Installation fitted by Messrs John Brown & Co. Limited 6 Bank When fitted 1907

DESCRIPTION OF DYNAMO, ENGINE, ETC.

4 Turbo Dynamos of the condensing type each of 375 kilowatts normal output - at 115 Volts
1200 Revs per min & suitable for 150 lbs steam pressure
 Capacity of Dynamo 3409 Amperes at 115 Volts, whether continuous or alternating current continuous
 Where ^{are} Dynamo fixed in Dynamo Room Orlop Deck Whether single or double wire system is used double
 Position of Main Switch Boards on aft bulkhead of Dynamo Room having 11-750 Amp. circuit-breakers for 11 lighting circuits
 Positions of auxiliary switch boards and numbers of switches on each Auxiliary switch boards as follows: 1 on Orlop Deck
10 on Shelter Deck, 1 on Upper Deck, 1 on Main Deck, 8 on Lower Deck, 2 in Engine Room. 11 of the above
boards having each 7 switches and fuse branch circuits the remaining boards having from 9 to 3 fuse branches
 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 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
 Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 5,651 arranged in the following groups :-
 A _____ lights each of _____ candle power requiring a total current of _____ Amperes
 B _____ lights each of _____ candle power requiring a total current of _____ Amperes
 C See continuation sheet lights each of _____ candle power requiring a total current of _____ Amperes
 D _____ lights each of _____ candle power requiring a total current of _____ Amperes
 E _____ lights each of _____ candle power requiring a total current of _____ Amperes
2 Mast head lights with 1 lamp each of 32 candle power requiring a total current of 2.2 Amperes
2 Side lights with 1 lamp each of 32 candle power requiring a total current of 2.2 Amperes
24-6 light Cargo lights of 2,304 candle power, whether incandescent or arc lights Incandescent
 If arc lights, what protection is provided against fire, sparks, &c.

Where are the switches controlling the masthead and side lights placed in Masthead Indicator in Wheel House on Bridge

DESCRIPTION OF CABLES.

Main cable carrying 532 Amperes, comprised of 192 wires, each 14 L.S.G. diameter, .96 square inches total sectional area
 Branch cables carrying 38.9 Amperes, comprised of 19 wires, each 16 L.S.G. diameter, .06 square inches total sectional area
 Branch cables carrying 70 Amperes, comprised of 37 wires, each 14 L.S.G. diameter, .18 square inches total sectional area
 Leads to lamps carrying .58 Amperes, comprised of 1 wires, each 16 L.S.G. diameter, .003 square inches total sectional area
 Cargo light cables carrying 3.4 Amperes, comprised of 7 wires, each 20 L.S.G. diameter, .007 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Conductors of tinne copper wire insulated with pure and vulcanized India rubber and
taped. The whole vulcanized together then taped and braided. The main cables are further
protected by asbestos fire resisting material. Also vulcanized india rubber braided & lead covered.
 Joints in cables, how made, insulated, and protected Joints made in fire resisting main cables made by the
cable manufacturers

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 Cables from switch board are led along Port & Starboard side of
Engine Room then along Port & Starboard side of Dumber bulkheads in Dumber Room. In each case these cables
are led up Engine & Boiler Room vents to their respective auxiliary boards. Cables carried on porcelain
insulators on iron racks, and the whole covered in with shut iron.



Port of Glasgow.

Continuation of Report No. 25699 dated 23 August 07 on the "Luotania"

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 Lead covered

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

What special protection has been provided for the cables near boiler casings in existing compound mud cables.

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

How are cables carried through beams Lead females through bulkheads, &c. Watertight-glands.

How are cables carried through decks Watertight-deck tubes

Are any cables run through coal bunkers No or cargo spaces or spaces which may be used for carrying cargo, stores, or baggage Yes

If so, how are they protected Lead covered and armoured

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage Yes.

If so, how are the lamp fittings and cable terminals specially protected Cast iron covers

Where are the main switches and cut outs for these lights fitted in Shelter Deck.

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

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 4 voltmeters and 8 amperemeters, 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 98 per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 2,500 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.

John Brown & Company, Limited.

J. Henderson Electrical Engineers Date 23

COMPASSES.

Distance between dynamo electric motors and standard compass 466' Motor 20'

Distance between dynamo electric motors and steering compass 487' Motor 42'

The nearest cables to the compasses are as follows:—

A cable carrying	54	Amperes	8'	feet from standard compass	11'	feet from steering compass
A cable carrying	9.8	Amperes	8'	feet from standard compass	11'	feet from steering compass
A cable carrying	2.5	Amperes	12'	feet from standard compass	11'	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 course in the case of the standard compass and Nil degrees on course in the case of the steering compass.

John Brown & Company, Limited.

J. Henderson Builder's Signature. Date

GENERAL REMARKS.

This installation has been well fitted on board and when examined under ordinary working conditions was satisfactory.

A. McKean & James Hollison

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

Committee's Minute Glasgow 23 SEP 1907

Record Electric Light

It is submitted that the Record Elec. be noted in the Register Book.

24.9.07

LETTER OF CIRCUIT.	DESCRIPTION OF CIRCUIT.	NO OF LIGHTS			CURRENT ON MAINS
		32 CP	16 CP + TANTALUM	8 CP + HIALITE	
A	Street Draught Lamps				520.
B	Lights, Heaters, Grids, Thermostats		261	176	337.4
C	Lights, Thermostats, Grids, Heaters		204		197.3
D	Street Draught Lamps				520.
E	Lights, Lamps, Heaters		480	223	367.
F	Boat Hoists, Passenger Lifts				505.
G	2-12 Oct. Lamps, Hoist, Hoist				564.
H	Turning Motors, Lifting Motors, Lamps				1264
I	Lighting + Lamps		432		781.5
J	Street Draught Lamps				520.
K	Lights, Heaters, Thermostats		639	31	581.
L	Street Draught Lamps				520.
M	Lights, Lamps		431		638.9
N	Lights, Thermostats		597	298	582.7
O	Street Draught Lamps				520.
P	do do do				520.
Q	Lights, Heaters, Thermostats		557	91	509.8
R	Street Draught Lamps				520.
S	Lights, Thermostats	4	272		532.8
T	Refrigerating Machinery				670.
U	Street Draught Lamps				520.
V	Lights, Thermostats	1	571	24	654.
W	Lights, Thermostats		191	168	418.7
X	Boat Hoists, Grids, Knife Cleaners				621.
		5	4635	1011	
		Total			5,651.

A. McKean James Hollison

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 15-3m, 24.

