

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 27672.

Port of Glasgow Date of First Survey 11th March/09 Date of Last Survey 29th April/09 No. of Visits 17
 No. in Reg. Book on the Steel S/S "Colindale" Port belonging to Glasgow
 Built at GLASGOW By whom MESSRS CONNELL When built 1909
 Owners MESSRS BETHELL, GUTHRIE & Co. Owners' Address LONDON
 Yard No. 325 Electric Light Installation fitted by MESSRS H.T. BOOTHBY & Co. Ltd. When fitted 1909

DESCRIPTION OF DYNAMO, ENGINE, ETC.

DYNAMO - COMPOUND WOUND - MULTIPOLAR - SIS
 ENGINE - COMPOUND - 8" x 12" x 9" - SHANKS
 Capacity of Dynamo 220 Amperes at 100 Volts, whether continuous or alternating current CONTINUOUS
 Where is Dynamo fixed STARBOARD SIDE OF ENGINE ROOM Whether single or double wire system is used DOUBLE
 Position of Main Switch Board NEAR DYNAMO having switches to groups 9 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each none fitted

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 287 @ 16c.p. arranged in the following groups :-

Group	Description	Lights	Each of	Candle Power	Requiring a total current of	Amperes
A	MACHINERY	26	lights each of	16	15.09	Amperes
B	CARGO FORD	1	lights each of	16	19.2	Amperes
B	CARGO AFT	1	lights each of	16	19.2	Amperes
C	SHELTER DECK PORT	1	lights each of	16	12.3	Amperes
C	SHELTER DECK AFT	1	lights each of	16	12.3	Amperes
D	BOAT DECK	1	lights each of	16	14.5	Amperes
D	MANCATION	1	lights each of	16	15	Amperes
E	MUSIC ROOM	1	lights each of	16	6.7	Amperes
E	POST OFFICE	1	lights each of	16	6.7	Amperes
	2 Mast head lights with 1 lamp each of	32			1.12	Amperes
	2 Side lights with 1 lamp each of	32			1.12	Amperes
	66 Cargo lights of	16				Amperes

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

Where are the switches controlling the masthead and side lights placed IN CHART ROOM

DESCRIPTION OF CABLES.

Description	Amperes	Comprised of	Wires	Each	L.S.G. diameter	Square inches total sectional area
Main cable carrying	150.7		37	wires, each	12	.728
Branch cables carrying	29		7	wires, each	15	.216
Branch cables carrying	12.3		7/16	wires, each	16	.192
Leads to lamps carrying	36		31	wires, each	15	.108
Cargo light cables carrying	37		7	wires, each	15	.216

DESCRIPTION OF INSULATION, PROTECTION, ETC.

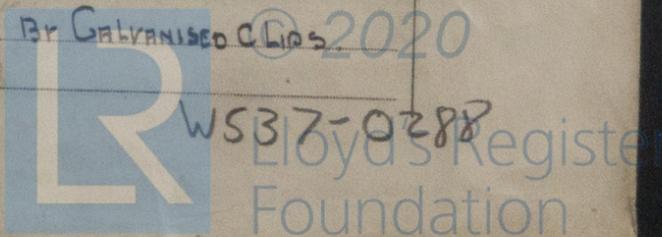
TAPE & VULCANISED RUBBER - PROTECTED BY LEAD COVERING & STEEL ARMOUR

Joints in cables, how made, insulated, and protected MADE IN PORCELAIN JOINT BOXES - INSULATED BY THE PORCELAIN & PROTECTED BY CAST IRON COVER

Are all the joints of cables thoroughly soldered, resin only having been used as a flux NO SOLDER USED 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 ALL JOINTS ACCESSIBLE

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 ATTACHED TO UNDERSIDE OF DECKS ETC. BY GALVANISED CLIPS PROTECTED BY LEAD COVERING & ARMOUR (STEEL)



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 & STEEL ARMOURED

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat LEAD COVERED & STEEL ARMOURED

What special protection has been provided for the cables near boiler casings LEAD COVERED & STEEL ARMOURED

What special protection has been provided for the cables in engine room LEAD COVERED & STEEL ARMOURED

How are cables carried through beams DRILLED HOLES BUSHED WITH LEAD through bulkheads, &c. DRILLED HOLES FITTED WITH STUFFING GLANDS

How are cables carried through decks IN IRON TUBES FILLED WITH BITUMEN

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 No

Cargo light cables, whether portable or permanently fixed PORTABLE How fixed WITH PLUG & SOCKET

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 YES supplied with a voltmeter and YES 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.

H. T. BOOTHROYD, LIMITED.

H. T. Boothroyd Electrical Engineers

Date April 26th 1909

COMPASSES.

Distance between dynamo or electric motors and standard compass 130

Distance between dynamo or electric motors and steering compass 120

The nearest cables to the compasses are as follows:—

A cable carrying <u>5</u> Amperes	<u>25</u> feet from standard compass	<u>15</u> feet from steering compass
A cable carrying _____ Amperes	_____ feet from standard compass	_____ feet from steering compass
A cable carrying _____ Amperes	_____ feet from standard compass	_____ feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power

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

CHARLES CONNELL & CO., Limited.

Builder's Signature.

Date 5th May 1909

GENERAL REMARKS.

Plus installation has been fitted on board under special survey & tested under full working condition & found satisfactory

W. Gordon-Musclui

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

Committee's Minute

GLASGOW 6 MAY 1909

Electric light

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



Lloyd's Register
Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM 30, 13-5-04.