

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 18444

Port of Hull Date of First Survey Oct 10<sup>th</sup> Date of Last Survey 26<sup>th</sup> Oct No. of Visits eight

No. in Reg. Book 22 on the ~~Iron~~ Steel Se. Sr. Teno Port belonging to Valparaiso  
Built at Hull By whom Charles G. La When built 1906

Owners Comp. Sud. Americana de Vap Owners' Address Valparaiso  
Yard No. 522 Electric Light Installation fitted by J. H. Holmes & Co Newcastle When fitted 1906

### DESCRIPTION OF DYNAMO, ENGINE, ETC.

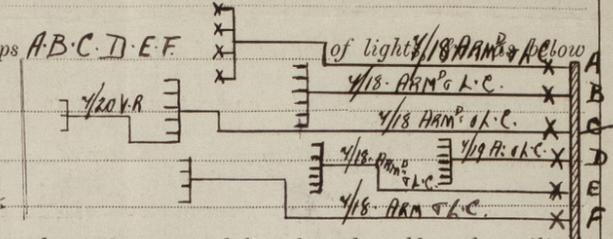
One 6" x 5" Open type Foster Engine 90 lbs steam pressure = coupled to —  
One 12/11 Dynamo Compound Wound 550 Revs per minute by J. H. Holmes & Co

Capacity of Dynamo 65 Amperes at 100 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Engine Room Starbd Side

Position of Main Switch Board near Dynamo having switches to groups A.B.C.D.E.F.

Positions of auxiliary switch boards and numbers of switches on each  
A. 1-A way DP fusebox aft end Starbd Alleyway. D. 1-4 way DP fusebox in Chart Room  
B. 1-6 " " in Stewards Room Port Side E. 1-6 " " " Engine Room  
C. 1-6 " " " Mess Room Starbd Side F. 1-A " " " Ford's End Starbd Alleyway



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

Yes 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 10A arranged in the following groups:—

Group	Description	Number of Lights	Wattage	Current (Amperes)
A	Navigation	12	5-32 cp 3-8 cp	7.88
B	Engines	16		8.96
C	Cargo Starbd	16		8.96
D	Cargo Aft	16		7.6A
E	Accom. Starbd	19		10.7A
	Port Aft	24	20-16 + 7-8	12.10
	Mast head lights	1		1.92
	Side lights	1		1.92
	Cargo lights	8	3-16	incandescent

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

Where are the switches controlling the masthead and side lights placed Chart House.

### DESCRIPTION OF CABLES.

Main cable carrying	55 Amperes, comprised of	19 wires, each	16 L.S.G. diameter, .060A	square inches total sectional area
Branch cables carrying	8.96 Amperes, comprised of	4 wires, each	18 L.S.G. diameter, .0125	square inches total sectional area
Branch cables carrying	7.6A Amperes, comprised of	4 wires, each	19 L.S.G. diameter, .0084	square inches total sectional area
Leads to lamps carrying	.56 Amperes, comprised of	1 wire, each	18 L.S.G. diameter, .0018	square inches total sectional area
Cargo light cables carrying	1.68 Amperes, comprised of	108 wires, each	38 L.S.G. diameter, .0032	square inches total sectional area

### DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cables are insulated with pure rubber, Vulcanised & taped & further protected by lead ~~iron~~ sheathing where required

Joints in cables, how made, insulated, and protected

Splined Soldered & insulated with rubber protective tapes &c.

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 Cabins, lead covered clipped up, Iron pipes in Holds, Tween Decks, Engine Boiler Rooms, Tunnel shafts, leads L.C. & Armoured



**DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.**

Are they in places always accessible

Yes When cargo is out

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture

f.c. & removed cables

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

do

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

Insulating Bushes

through bulkheads, &c.

Bulkhead glands

How are cables carried through decks

Deck tubes

Are any cables run through coal bunkers ~~no~~ or cargo spaces ~~yes~~ or spaces which may be used for carrying cargo, stores, or baggage

yes

If so, how are they protected

iron 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

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

**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 ~~no~~ But not an amperemeter, fixed on main Bd.

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 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.

*J. H. Holmes - Co*

Electrical Engineers

Date 22/11/06

**COMPASSES.**

Distance between dynamo or electric motors and standard compass

64 ft } about  
56 ft }

Distance between dynamo or electric motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying	7.88	Amperes	16	feet from standard compass	13	feet from steering compass
A cable carrying	8.96	Amperes	30	feet from standard compass	25	feet from steering compass
A cable carrying	5.32	Amperes	30	feet from standard compass	25	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.

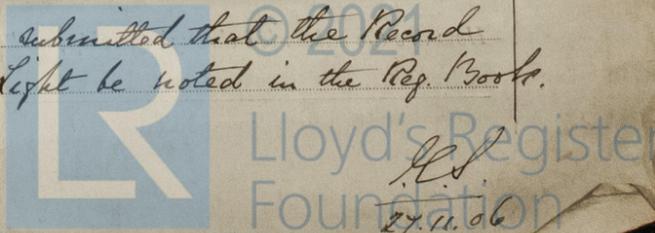
Builder's Signature. Date

**GENERAL REMARKS.** This vessel having been fitted with an Electric Light Installation, is eligible in my opinion to have same noted in the Register Book.

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

Committee's Minute

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



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 17.