

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 18586

Port of Hull Date of First Survey Gov. 12<sup>th</sup> Date of Last Survey 27.12.06 No. of Visits 11  
 No. in on the Iron or Steel S.S. "Hebe" No. 523 Port belonging to Valparaiso  
 Reg. Book 35 Buff. Built at Hull By whom Carlos L. L. When built 1906  
 Owners Compania Submarina de Vapores Owners' Address Valparaiso  
 Yard No. 523 Electric Light Installation fitted by J. N. Holmes & Co. Newcastle When fitted 1906

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

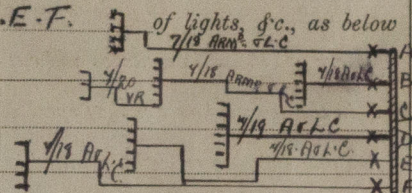
One 6" x 5" open type Foster engine 90 lbs steam pressure — coupled to —  
One 12A Dynamo, compound wound, 350 Revs. P.M.

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

Where is Dynamo fixed Engine Room Starboard side Whether single or double wire system is used Double

Position of Main Switch Board near Dynamo having switches to groups A.B.C.D.E.F. of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each  
 A. 1-4 — DP FUSE BOX aft end Starboard alleyway  
 B. 1-6 — Do in Stewards Room Aft side  
 C. 1-6 — Do in Mess Room Starboard side  
 D. 1-4 — DP FUSE BOX in Chart Room  
 E. 1-4 — Do Engine Room  
 F. 1-4 — Do Starboard 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:—

A	Navigation	12	lights each of	4-16-5-32-3-8	candle power requiring a total current of	7.88	Amperes
B	Engines	16	lights each of	16	candle power requiring a total current of	8.96	Amperes
C	Cargos Ford	16	lights each of	16	candle power requiring a total current of	8.96	Amperes
D	Cargos aft	14	lights each of	16	candle power requiring a total current of	4.64	Amperes
E	Accommodation	19	lights each of	16	candle power requiring a total current of	10.44	Amperes
	Fore aft	24	" " " " " "	20-16-4-8	" " " " " "	13.16	Amperes
included	Mast head light with	1	lamp each of	32	candle power requiring a total current of	1.92	Amperes
in above	Side light with	1	lamp each of	32	candle power requiring a total current of	1.92	Amperes
	Cargo lights	8	each of	3-16 cp.	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 Chart House

## DESCRIPTION OF CABLES.

Main cable carrying	55	Amperes, comprised of	19	wires, each	16	L.S.G. diameter,	.0604	square inches total sectional area
Branch cables carrying	8.96	Amperes, comprised of	7	wires, each	18	L.S.G. diameter,	.0125	square inches total sectional area
Branch cables carrying	4.64	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	wires, 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

spliced, 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 - Engines & Boiler Rooms Tunnel starboard heads 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 L. 6 & arm? cables

What special protection has been provided for the cables near galleys 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 \_\_\_\_\_

The installation is \_\_\_\_\_ supplied with a voltmeter But not an amperemeter, fixed on Main Bd

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 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.

M. H. M. Co.

Electrical Engineers

Date 18/12/06

COMPASSES.

Distance between dynamo or electric motors and standard compass 64 ft

Distance between dynamo or electric motors and steering compass 56 ft } about

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>7.88</u>	<u>16</u>	<u>13</u>	<u>13</u>
<u>8.96</u>	<u>30</u>	<u>25</u>	<u>25</u>
<u>5.32</u>	<u>30</u>	<u>25</u>	<u>25</u>

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 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.

Lloyd's Register Foundation

28.12.06

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 10, 2m, 34.