

REPORT ON ELECTRIC LIGHTING INSTALLATION. No.

Port of Bilbao Date of First Survey _____ Date of Last Survey _____ No. of Visits _____
 No. in Reg. Book on the ~~Steel~~ Steel 1/8 "ALDECOA" Port belonging to Bilbao
 Built at Seatas, Bilbao By whom La Constructora Naval When built 1922
 Owners St. D. Francisco Aldecoa Owners' Address Bilbao
 Yard No. 17 Electric Light Installation fitted by Shipbuilders When fitted 1922

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One 62x6 vertical, totally enclosed, single cylinder, double acting steam engine direct coupled to a four pole compound wound dynamo.

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

Where is Dynamo fixed in Engine room Whether single or double wire system is used double wire

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

Positions of auxiliary switch boards and numbers of switches on each Each circuit is provided with distribution boxes in convenient positions and a switch is provided for each light or group of lights.

If fuses 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 fuses fitted to both flow and return wires or cables of all circuits including lamp circuits yes

Are the fuses of non-oxidizable metal yes and constructed to fuse at an excess of 50 per cent over the normal current

Are all fuses 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 fuses constructed of incombustible materials and fitted on incombustible bases yes, porcelain.

Total number of lights provided for 157 @ 16 cp. arranged in the following groups:—

A	<u>37</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>13.3</u>	Amperes
B	<u>38</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>16.4</u>	Amperes
C	<u>38</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>21.3</u>	Amperes
D	<u>44</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>24.6</u>	Amperes
E	<u>Wireless</u>	lights each of	—	candle power requiring a total current of	<u>10.0</u>	Amperes
	<u>2</u>	Mast head light with <u>1</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>1.2</u>	Amperes
	<u>2</u>	Side light with <u>1</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>1.2</u>	Amperes
	<u>5</u>	Cargo lights of <u>six lamps of 16</u>		candle power, whether incandescent or arc lights	<u>incandescent</u>	

If arc lights, what protection is provided against fire, sparks, &c. none fitted

Where are the switches controlling the masthead and side lights placed in Wheelhouse.

DESCRIPTION OF CABLES.

Main cable carrying 100 Amperes, comprised of 19 wires, each 0.83 S.W.G. diameter, 100 square inches total sectional area
 Branch cables carrying 24 Amperes, comprised of 7 wires, each 0.36 S.W.G. diameter, 0.07 square inches total sectional area
 Branch cables carrying 14 Amperes, comprised of 7 wires, each 0.44 S.W.G. diameter, 0.10 square inches total sectional area
 Leads to lamps carrying 6 Amperes, comprised of 1 wires, each 0.44 S.W.G. diameter, 0.015 square inches total sectional area
 Cargo light cables carrying 3.6 Amperes, comprised of 162 wires, each 0.076 S.W.G. diameter, 0.07 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Vulcanized indiarubber taped and lead covered and where exposed steel armouring over the lead covering

Joints in cables, how made, insulated, and protected in cast iron joint boxes filled with compound, no soldered joints.

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances — 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 & no

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 Lead covered & armoured, secured by means of galvanized iron clips. Where necessary run in pipes or covered with wood

DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible No

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

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

What special protection has been provided for the cables near boiler casings Lead & armoured

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

How are cables carried through beams in lead bushes ✓ through bulkheads, &c. in W.T. glands ✓

How are cables carried through decks in W.T. 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 Lead covered & armoured in pipes or with stout wood covering

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 fuses for these lights fitted _____

If in the spaces, how are they specially protected _____

Are any switches or fuses fitted in bunkers No

Cargo light cables, whether portable or permanently fixed portable How fixed D.C.I. connection boxes

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel double wire system

How are the returns from the lamps connected to the hull _____

Are all the joints with the hull in accessible positions _____

Is the installation supplied with a voltmeter yes, and with an amperemeter yes, fixed on switchboard

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and fuses fitted in positions not liable to the accumulation of petroleum vapour or gas _____

Are any switches, fuses, 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 not less than that of the Engineering Standards Committee's standard, and the wires are protected by tinning from the sulphur compounds present in the insulating material.

Insulation of cables is guaranteed to have a resistance of not less than 600 megohms per statute mile at 60° Fahrenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than 500 volts and while the cable is still immersed.

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. C. Deslap AMIEE. Electrical Engineer Date 24. 2. 22.

COMPASSES.

Distance between dynamo or electric motors and standard compass 35 metres

Distance between dynamo or electric motors and steering compass 33 metres

The nearest cables to the compasses are as follows:—

A cable carrying	<u>-6</u>	Ampères	<u>1</u>	feet from standard compass	<u>4</u>	feet from steering compass
A cable carrying	<u>-6</u>	Ampères	<u>8</u>	feet from standard compass	<u>1/2</u>	feet from steering compass
A cable carrying		Ampères		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.

SOCIEDAD ESPAÑOLA DE CONSTRUCCIÓN NAVAL
de fausto Builder's Signature. Date 24. 2. 22.
 Delegado del Consejo de Admón.

GENERAL REMARKS.

This electric lighting installation has been exam^d whilst being fitted on board & afterwards tried under working conditions & found satisfactory & in accordance with the Rules. This vessel is therefore eligible in my opinion to have notation of Electric lighting noted in the Register Book.

It is submitted that this vessel is eligible for 250pts. paid 10/4/22 THE RECORD Elec. Light: 1/19/22 C. H. Foulmer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 23 JAN. 1923 TUE. APR. 24 1923

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

2m. 11. 20. — Transfer.

