

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No.

Port of Bristol Date of First Survey 3/3/20 Date of Last Survey 17/4/20 No. of Visits 4  
 No. in Reg. Book on the Steel 5/ ANNIK Port belonging to Nantles  
 Built at Bristol By whom C. Hill & Sons When built 1920  
 Owners Compagnie Auxiliaire de Navigation Owners Address C. Hill & Sons When fitted 1920  
 Yard No. 137 Electric Light Installation fitted by C. Hill & Sons

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Enclosed single crank, forced lubrication, direct coupled multipolar compound wound dynamo

Capacity of Dynamo 75 Amperes at 100 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed Top of E. R. Staring engine room  
 Position of Main Switch Board du having switches to groups Four circuits of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each E. Room + accommodation with local switching with local switching  
 If cut outs are fitted on main switch board to the cables of main circuit Yes and on each auxiliary switch boards 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 Yes  
 Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases Yes

Total number of lights provided for 106 arranged in the following groups:—

Group	Description	Number of Lights	Candle Power	Current (Amperes)
A	Navigation	32	5.6	Amperes
B	Cargo	16	13.4	Amperes
C	Accommodation	16	17.4	Amperes
D	Engine Room	16	12.8	Amperes
E	Mast head light with 2 lamps each of	32	1.1	Amperes
	Side light with 2 lamps each of	32	1.1	Amperes
	4 Cargo lights of each	0.96	Incandescent	

If arc lights, what protection is provided against fire, sparks, &c. ✓  
 Where are the switches controlling the masthead and side lights placed Bridge

## DESCRIPTION OF CABLES.

Number of Cables	Amperes	Wires	Diameter (L.S.G.)	Total Sectional Area
113	113	19	14	.094 square inches
34	34	7	18	.0125 square inches
24	24	7	20	.0070 square inches
72	72	3	22	.0018 square inches
24	24	7	20	.0070 square inches

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cable Makers Association 600 meg ohm grade, Armoured with G. I. wires Braided lead covered & armoured & lead covered cables  
 Joints in cables, how made, insulated, and protected Porcelain Junction Boxes protected with C. I. covers

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 Through beams, lead washers

**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 & armoured + lead covered 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 *Lead bushings* through bulkheads, &c. *W. T glands*

How are cables carried through decks *Galvanised bushes*

Are any cables run through coal bunkers *Yes* or cargo spaces *Yes* or spaces which may be used for carrying cargo, stores, or baggage *Yes*

If so, how are they protected *G. I. armoured + lead covered cables*

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 *✓*

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 *C. I. Plug Boxes*

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 *Yes* supplied with a voltmeter and *Yes* an amperemeter, fixed *Switchboard*

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 *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.

CHARLES HILL & SONS, LTD.

*Charles Hill*  
MANAGING DIRECTOR

Electrical Engineers

Date *24/4/20*

**COMPASSES.**

Distance between dynamo or electric motor and standard compass *65 feet*

Distance between dynamo or electric motors and steering compass *60 feet*

The nearest cables to the compasses are as follows:—

A cable carrying <i>5</i> Amperes <i>Lighting</i>	feet from standard compass	and	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 HILL & SONS, LTD.

*Charles Hill*  
MANAGING DIRECTOR

Builder's Signature

Date *24/4/20*

**GENERAL REMARKS**

*This Electric Light installation is in accordance with the Rules. The Workmanship & Material are good. Installation tried under working conditions.*

*It is submitted that this vessel is eligible for THE RECORD*

*G. A. Dupin Toupin*

ELEC: LIGHT Surveyor to Lloyd's Register of British and Foreign Shipping

Committee's Minute *FIVE MAY 1920*

MACHINERY CERT. WRITTEN



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THE SURVEYORS ARE REQUESTED TO WRITE ACROSS THIS MARGIN.