

# REPORT ON ELECTRIC LIGHTING INSTALLATION.

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No. 27997

Port of Sunderland Date of First Survey 4 Dec '20 Date of Last Survey 21 Dec '20 No. of Visits 4  
 No. in Reg. Book on the Iron or Steel "STONEWALL" Port belonging to New York  
 Built at Sunderland By whom W. Bartram & Sons Ltd When built 1920  
 Owners Garland Steamship Corporation Owners' Address Fifth Avenue New York  
 Yard No. 253 Electric Light Installation fitted by Clarke, Chapman & Co Ltd When fitted 1920

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

One single cylinder double acting open type vertical engine direct coupled to a continuous current 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  
 Position of Main Switch Board near Dynamo having switches to groups A, B, C, & D of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each each light & group of lights provided with switches as required.

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, slate & porcelain

Total number of lights provided for 120 arranged in the following groups :-

| Group | Description                 | Number of Lights | Candle Power    | Amperes |
|-------|-----------------------------|------------------|-----------------|---------|
| A     | Engine Room                 | 22               | 16              | 12.3    |
| B     | Saloon Forward              | 67               | 6 @ 16 & 5 @ 32 | 40.3    |
| C     | Engineers + aft             | 31               | 16              | 17.3    |
| D     | Wireless                    | -                | -               | 25      |
| E     | Mast head light with 1 lamp | 1                | 32              | 2.2     |
|       | Side light with 1 lamp      | 1                | 32              | 2.2     |
|       | Cargo lights of 7 - 16      | 7                | 16              | 2.2     |

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 | Wires | S.W.G. diameter | Square inches total sectional area |
|-----------------------------|---------|-------|-----------------|------------------------------------|
| Main cable carrying         | 100     | 19    | 14              | .094                               |
| Branch cables carrying      | 40.3    | 7     | 14              | .014                               |
| Branch cables carrying      | 12.3    | 4     | 20              | .0040                              |
| Leads to lamps carrying     | .6      | 1     | 18              | .0018                              |
| Cargo light cables carrying | 3.9     | 168   | 38              | .0050                              |

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Vulcanized india rubber taped & braided & lead covered, where exposed steel armoured overall.

Joints in cables, how made, insulated, and protected No joints except mechanical ones.

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances 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 Lead & armoured cables run through tween decks & clipped to underside of deck with strong galvanized iron clips.

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**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 & steel armoured cables*

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

What special protection has been provided for the cables near boiler casings " " "

What special protection has been provided for the cables in engine room " " "

How are cables carried through beams *in lead bushes* through bulkheads, &c. *in W. J. Glands*

How are cables carried through decks *in galvanized iron deck tubes.*

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 *Lead & armoured 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 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 *to W. J. Connection 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 —

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.

*W. W. Brown* Director *W. W. Brown* Electrical Engineers Date *Jan 7th 1921*

**COMPASSES.**

Distance between dynamo or electric motors and standard compass *86 feet*

Distance between dynamo or electric motors and steering compass *80 feet*

The nearest cables to the compasses are as follows:—

|                  |          |         |           |                            |           |                            |
|------------------|----------|---------|-----------|----------------------------|-----------|----------------------------|
| A cable carrying | <i>1</i> | Amperes | <i>12</i> | feet from standard compass | <i>6</i>  | feet from steering compass |
| A cable carrying | <i>1</i> | Amperes | <i>6</i>  | feet from standard compass | <i>12</i> | feet from steering compass |
| A cable carrying | <i>—</i> | Amperes | <i>—</i>  | feet from standard compass | <i>—</i>  | feet from steering compass |

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

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

*W. W. Brown* Builder's Signature. Date *11 Jan 1921*

**GENERAL REMARKS.**

*W. W. Brown*

The installation has been satisfactorily fitted in the vessel, tested at full load and found good.

*It is submitted that this vessel is eligible for the RECORD ELEC LIGHT.*

*Reck. 13/1/21*

*S. C. Davis* 11 JAN 1921  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



1m7,10—Transfer.