

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 17545.

Port of Glasgow. Date of First Survey 8<sup>th</sup> Oct. 1919 Date of Last Survey 20<sup>th</sup> Nov. 1919 No. of Visits 12.  
 No. in Reg. Book on the ~~Iron~~ Steel Screw Steamship "ROSEWORTH" Port belonging to Newcastle-on-Tyne.  
 Built at Port. Glasgow. By whom Dunlop, Rimmer & Co. Ltd. When built 1919.  
 Owners The Robert Stanley Shipping Co. Ltd. Owners' Address Newcastle-on-Tyne.  
 Yard No. 337. Electric Light Installation fitted by Claud Hamilton Ltd. When fitted 1919.

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Open type high speed 6 $\frac{1}{2}$ " x 6" steam engine direct coupled to compound wound ship lighting dynamo running at 360 R.P.M.  
 Capacity of Dynamo 100 Amperes at 100 Volts, whether continuous or alternating current continuous  
 Where is Dynamo fixed Engine Room Whether single or double wire system is used double  
 Position of Main Switch Board Engine Room having switches to groups 5 of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each none

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-oxidisable metal yes and constructed to fuse at an excess of 100 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

Total number of lights provided for 104 arranged in the following groups:—

A	15	lights each of	16 C.P.	candle power requiring a total current of	9	Amperes
B	34	lights each of	16 C.P.	candle power requiring a total current of	20	Amperes
C	5	lights each of	32 C.P.	candle power requiring a total current of	8	Amperes
D	25	lights each of	16 C.P.	candle power requiring a total current of	15	Amperes
E	24	lights each of	16 C.P.	candle power requiring a total current of	14	Amperes
2	Mast head light with	1	lamps each of	32	candle power requiring a total current of	2.4
2	Side light with	1	lamps each of	32	candle power requiring a total current of	2.4
5	Cargo lights of	5	lamps of 16	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 Room.

## DESCRIPTION OF CABLES.

Main cable carrying 100 Amperes, comprised of 19 wires, each 14 S.W.G. diameter, .093<sup>4</sup> square inches total sectional area  
 Branch cables carrying 20 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, .007 square inches total sectional area  
 Branch cables carrying 15 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, .007 square inches total sectional area  
 Leads to lamps carrying 3 Amperes, comprised of 1 wires, each 14 S.W.G. diameter, .002 square inches total sectional area  
 Cargo light cables carrying 15 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, .007 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

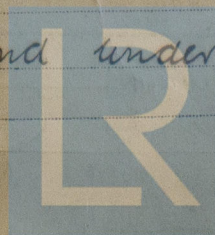
Cables insulated with pure and vulcanizing india rubber taped braided and lead covered or armoured as required.

Joints in cables, how made, insulated, and protected no 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 —

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 Fixed to bulkheads and under deck by means of brass or iron clips.



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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 cover*

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

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

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

How are cables carried through beams *Lead bushes* through bulkheads, &c. *W.T. Glands*

How are cables carried through decks *Deck Lubes*

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 *Armoured*

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 *—*

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 *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.

*CLAUD HAMILTON LIMITED*

*h.f.* Electrical Engineers

Date *28th Nov. 19.*

COMPASSES.

Distance between dynamo or electric motors and standard compass *50 feet*

Distance between dynamo or electric motors and steering compass *55 "*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>15</i>	<i>10</i>	<i>15</i>	<i>15</i>
<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>
<i>✓</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>

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 *—* degrees on *—* course in the case of the

standard compass and *—* degrees on *—* course in the case of the steering compass.

*Geo. G. Parker*

Builder's Signature.

Date

*4th December 1919.*

GENERAL REMARKS.

*The material & workmanship are good, and on completion the installation was tested under full power with satisfactory results and it is fitted in accordance with the Society's requirements.*

*It is submitted that this vessel is eligible for*

**THE RECORD ELEC LIGHT.** *8/12/19*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 16 DEC 1919**

*Elec. Light*

*W.M.*



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