

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 34185

Port of Glasgow Date of First Survey 22-8-14 Date of Last Survey 2-10-14 No. of Visits 4  
 No. in on the ~~Iron~~ Steel S. S. "Gorchelyde" Port belonging to Glasgow  
 Reg. Book Built at Glasgow By whom River Clyde S. B. Co. & Co. When built 1914  
 Owners Messrs Brys & Gylsam Ltd. Owners' Address London  
 Yard No. 2 Electric Light Installation fitted by Messrs. W. Martin & Co. Glasgow. When fitted 1914.

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

One 5 Kw. Compound Wound Dynamo direct coupled to a single cylinder double acting open type steam engine.

Capacity of Dynamo 50 Amperes at 100 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed bottom platform in Engine Rm. Whether single or double wire system is used double

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

Positions of auxiliary ~~boards~~ <sup>fuses</sup> boards and numbers of ~~switches~~ <sup>fuses</sup> on each 4 way in Steering Engine Recess, 4 way in Saloon passage, 6 way in Engine Room, 6 way in Chart Room.

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

Total number of lights provided for 48 arranged in the following groups:—

A	<u>Aft.</u>	<u>23</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>13</u>	Amperes
B	<u>Forward</u>	<u>35</u>	lights each of	<u>8, 16, &amp; 32</u>	candle power requiring a total current of	<u>19</u>	Amperes
C	<u>Engine Room</u>	<u>20</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>11.2</u>	Amperes
D			lights each of	<u>000</u>	candle power requiring a total current of		Amperes
E			lights each of		candle power requiring a total current of		Amperes
1	<u>Mast head light with</u>	<u>1</u>	lamps each of	<u>32</u>	candle power requiring a total current of	<u>1.12</u>	Amperes
2	<u>Side lights with</u>	<u>2</u>	lamps each of	<u>32</u>	candle power requiring a total current of	<u>2.24</u>	Amperes
2	<u>Cargo lights of</u>			<u>96</u>	candle power, whether incandescent or arc lights	<u>incandescent</u>	

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

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

## DESCRIPTION OF CABLES.

Main cable carrying 50 Amperes, comprised of 19 wires, each 16 S.W.G. diameter, .060 square inches total sectional area

Branch cables carrying 19 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, .022 square inches total sectional area

Branch cables carrying 11.2 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, .022 square inches total sectional area

Leads to lamps carrying 2.8 Amperes, comprised of 1 wires, each 16 S.W.G. diameter, .0032 square inches total sectional area

Cargo light cables carrying 3.36 Amperes, comprised of 108 wires, each 38 S.W.G. diameter, .0048 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

H.C. Copper wire tinned, insulated with pure & vulcanised rubber & tape, the whole vulcanised together, taped, braided & compounded or sheathed with lead or steel armour.

Joints in cables, how made, insulated, and protected No joints, except on terminals.

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 Lead covered or Armoured wires clipped openly throughout the ship.



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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 Covering*

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

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

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

How are cables carried through beams *bushed where unarmoured* through bulkheads, &c. *W.I. Glands* ✓

How are cables carried through decks *Metal Tubes fitted W.I. to Decks* ✓

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 *Steel Armour cables clipped openly, protected by beams*

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 *Tork Connections*

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. C. Martin & Co.*

Electrical Engineers

Date *30th October 1917*

COMPASSES.

Distance between dynamo or electric motors and standard compass

*64 ft from Dynamo*

Distance between dynamo or electric motors and steering compass

*64 ft from Dynamo*

The nearest cables to the compasses are as follows:—

A cable carrying *.28* Amperes *6* feet from standard compass *1* feet from steering compass

A cable carrying *.28* Amperes *1* feet from standard compass *6* 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 *yes*

The maximum deviation due to electric currents, etc., was found to be *Nil* degrees on *a certain* course in the case of the

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

BRYN & GYLSSEN, LTD.

RIVER CLYDE SHIPBUILDING WORKS.

Builder's Signature.

Date

*12th Nov. 1917*

GENERAL REMARKS.

*The Installation has been fitted on board in accordance with Rules of the Society, tried under full working conditions & found satisfactory.*

*It is submitted that this vessel is eligible for THE RECORD. Elec. Light.*

*Wm. A. Ferguson.*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW

5- NOV. 1917

*Elec. Light*



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