

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 34051

Port of Glasgow Date of First Survey and Date of Last Survey 6-4-14 No. of Visits 1
 No. in on the Iron or Steel S. S. "MYRTIS" Port belonging to Glasgow
 Reg. Book 1601 Built at Gouline By whom Gouline S. B. Co. When built 1905.
 Owners J. & P. Hutchison Owners' Address Glasgow
 Yard No. Electric Light Installation fitted by James Espey Esq When fitted 1914.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One $5\frac{1}{2} \times 5$ open type vertical "Rohy" engine, coupled direct on combined bed plate to compound wound dynamo.

Capacity of Dynamo 45 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 wire

Position of Main Switch Board in Engine Room having switches to groups A, B, C, D. of lights, &c., as below

Positions of auxiliary ^{fuse} switch boards and numbers of ^{fuses} switches on each Midship Cabin.
Two double pole fuse boxes, each with four way fuses, and separate switches for each Signal lamp.

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 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 83. arranged in the following groups:—

A	Midship	24 lights each of	16	candle power requiring a total current of	4.2	Amperes
B	Cargo Chutes	32 lights each of	16	candle power requiring a total current of	18	Amperes
C	Engine Room	18 lights each of	16	candle power requiring a total current of	2.6	Amperes
D	Aft.	7 lights each of		candle power requiring a total current of	2.4	Amperes
E		lights each of		candle power requiring a total current of		Amperes
Two	Mast head lights with	two lamps each of	32	candle power requiring a total current of	2.2	Amperes
Two	Side lights with	two lamps each of	32	candle power requiring a total current of	2.2	Amperes
Four	Cargo	lights of	each	128	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 Midship Cabin.

DESCRIPTION OF CABLES.

Main cable carrying	33	Amperes, comprised of	7	wires, each	14	S.W.G. diameter,	.0352	square inches total sectional area
Branch cables carrying	4.2	Amperes, comprised of	7	wires, each	21	S.W.G. diameter,	.055	square inches total sectional area
Branch cables carrying	18	Amperes, comprised of	7	wires, each	21	S.W.G. diameter,	.055	square inches total sectional area
Leads to lamps carrying	2	Amperes, comprised of	1	wires, each	18	S.W.G. diameter,	.0018	square inches total sectional area
Cargo light cables carrying	4.5	Amperes, comprised of	108	wires, each	.006	S.W.G. diameter,	.003	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Insulated with pure and vulcanized rubber taped & braided. Armoured with galvanized iron wires, braided overall, lead covers in Accommodation.

Joints in cables, how made, insulated, and protected No joints in any cable, all run direct to the distribution boxes, or looped in from light to light.

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances None. 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 None.

Are there any joints in or branches from the cable leading from dynamo to main switch board None.

How are the cables led through the ship, and how protected Under main deck, along side telegraph, galvanized iron wires.

DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *yes, except in Hold or Coal Bunkers.*

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *galvanized iron tubes.*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *galvanized iron wires.*

What special protection has been provided for the cables near boiler casings *galvanized iron wires.*

What special protection has been provided for the cables in engine room *galvanized iron wires.*

How are cables carried through beams *in galvanized iron wires* through bulkheads, &c. *watertight brass couplings.*

How are cables carried through decks *up through galvanized iron tubes, watertight.*

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 *galvanized iron wires.*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *none.*

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

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 *in Engine Room.*

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.

James Eadie

Electrical Engineers

Date *25th July 1917*

COMPASSES.

Distance between dynamo or electric motors and standard compass *100 ft*

Distance between dynamo or electric motors and steering compass *100 ft*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>2</i> Amperes	<i>4</i> feet from standard compass	<i>1</i> feet from steering compass
A cable carrying	<i>1</i> — Amperes	<i>4</i> feet from standard compass	<i>4</i> feet from steering compass
A cable carrying	<i>9</i> — Amperes	<i>10</i> feet from standard compass	<i>15</i> 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.

Humboldt Messrs J.P. Hutchison, Owners
Robert D. Kettle, Supt. Engineer

Builder's Signature.

Date *30/8/17*

GENERAL REMARKS.

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

See L3-3-0

this is submitted for THE RECORD. Filed light.

Fred. A. Ferguson.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW

7 - AUG. 1917

Elec. Light.



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

L.H.A. 6/8/17