

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 36803

Port of Glasgow Date of First Survey 1st Oct. 1916 Date of Last Survey 4-4-17 No. of Visits 16
 No. in on the Steel S. S. "SMERDIS" Port belonging to Glasgow
 Reg. Book Built at Ardrossan By whom Ardrossan S. S. Co Ltd When built 1914
 Owners J. & P. Hutchison Owners' Address Hope Street Glasgow
 Yard No. 264 Electric Light Installation fitted by Messrs J. Lurie & Co. When fitted 1914

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One $5\frac{1}{2} \times 5$ open framed vertical engine, running at 400 revs. per min.

Coupled direct on combined 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 near Dynamo having switches to groups A B C D of lights, &c., as below

Positions of auxiliary ^{fuse} switch boards and numbers of ^{fuse} switches on each Midship Cabin & Engine Room.
Three 4 way O.P. fuse boxes. Switches controlling signal lamps on Bridge

If fuses are fitted on main switch board to the cables of main circuit no 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 92 arranged in the following groups:—

A	Midships	20 lights each of	16 and 32	candle power requiring a total current of	8	Amperes
B	Cargo Chusters	32 lights each of	16 CP	candle power requiring a total current of	18	Amperes
C	Aft Cabin	20 lights each of	16 CP	candle power requiring a total current of	4	Amperes
D	Engine Room	20 lights each of	16 CP	candle power requiring a total current of	4	Amperes
E		lights each of		candle power requiring a total current of		Amperes
Two	Mast head lights with	two ^{one} lamps each of	32	candle power requiring a total current of	1-12	Amperes
Two	Side light with	one lamps each of	32	candle power requiring a total current of	1-12	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 in Box on Bridge.

DESCRIPTION OF CABLES.

Main cable carrying	34 Amperes, comprised of	7 wires, each	14 S.W.G. diameter,	.0352 square inches total sectional area
Branch cables carrying	18 Amperes, comprised of	7 wires, each	21 S.W.G. diameter,	.00563 square inches total sectional area
Branch cables carrying	8 Amperes, comprised of	7 wires, each	21 S.W.G. diameter,	.00563 square inches total sectional area
Leads to lamps carrying	.2 Amperes, comprised of	1 wires, each	18 S.W.G. diameter,	.00181 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 ~~and~~ braided, and armoured and braided overall. Lead covered in Accommodation.

Joints in cables, how made, insulated, and protected No joints. all wires run direct from Distribution Boxes and looped 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, alongside Telegraph, Galvanized iron wires.

DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

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

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

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

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

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

How are cables carried through beams *Lead pencils* through bulkheads, &c. *iron watertight glands.*

How are cables carried through decks *iron tubes watertight, standing at least 12" above deck.*

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 *Armoured wiring.*

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 *none*

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 *Main Switch 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° Farh 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 that it is at this date in good order and safe working condition.

James Espe

Electrical Engineers

Date *16th February*

COMPASSES.

Distance between dynamo or electric motors and standard compass *about 20 feet*

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

The nearest cables to the compasses are as follows:—

A cable carrying	<i>18</i>	Ampères	<i>20</i>	feet from standard compass	<i>5</i>	feet from steering compass
A cable carrying	<i>8</i>	Ampères	<i>20</i>	feet from standard compass	<i>5</i>	feet from steering compass
A cable carrying	<i>1</i>	Ampères	<i>5</i>	feet from standard compass	<i>1</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.

L. Aitken-Lynch

Managing Director.

Builder's Signature.

Date

GENERAL REMARKS.

The installation has been fitted on board in a satisfactory manner & in accordance with the Rules of the Society. It has been tried under steam with full working conditions & found satisfactory.

this vessel is eligible for THE RECORD. Elec. Light. JWD. 26/4/17.

Fred. A. Ferguson.

Surveyor to Lloyd's Register of British and Foreign Shipping

Committee's Minute *GLASGOW. 24 APR. 1917.*

Elec. Light.



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