

WED. APR. 28 1920

Received at London Office

19

## REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 39852

Port of Glasgow. Date of First Survey 5/3/20. Date of Last Survey 12/4/20. No. of Visits 11  
 No. in on the Iron or Steel "S.S. Aeron" Port belonging to London  
 Reg. Book 323988 Built at Groon By whom Messrs The Ailco S.B. Co. Ltd. When built 1920  
 Owners The Glen Steam Nav. Co. Ltd. Owners' Address  
 Yard No. 367 Electric Light Installation fitted by Messrs. Claud Hamilton Ltd. When fitted 1920

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Enclosed type high speed steam engine direct coupled to a compound wound ship lighting dynamo  
 Capacity of Dynamo 90 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 8 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 Yes 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 186 arranged in the following groups:—

A	34	lights each of	16	candle power requiring a total current of	18	Amperes
B	29	lights each of	16	candle power requiring a total current of	15	Amperes
C	24	lights each of	16	candle power requiring a total current of	12	Amperes
D	38	lights each of	16	candle power requiring a total current of	19	Amperes
E	22	lights each of	16	candle power requiring a total current of	11	Amperes
	2	Mast head light with	1 lamp each of	32	candle power requiring a total current of	2
	2	Side light with	1 lamp each of	32	candle power requiring a total current of	2
	8	Cargo lights of	each of 6-16	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 Bridge

## DESCRIPTION OF CABLES.

Main cable carrying	90	Amperes, comprised of	19	wires, each	.072	S.W.G. diameter,	.075	square inches total sectional area
Branch cables carrying	19	Amperes, comprised of	7	wires, each	16	S.W.G. diameter,	.0221	square inches total sectional area
Branch cables carrying	12	Amperes, comprised of	7	wires, each	20	S.W.G. diameter,	.007	square inches total sectional area
Leads to lamps carrying	2	Amperes, comprised of	3	wires, each	22	S.W.G. diameter,	.0018	square inches total sectional area
Cargo light cables carrying	12	Amperes, comprised of	7	wires, each	20	S.W.G. diameter,	.007	square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

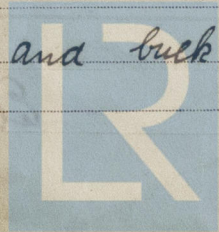
Vulcanized india rubber taped and lead covered or armoured.

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 Tied to under decks and bulk heads by brass w iron clips.



Lloyd's Register  
Foundation  
W300-0034



**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 W. T. Deck Tubes

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 with steel wires

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage Yes

If so, how are the lamp fittings and cable terminals specially protected Guarded with iron guard

Where are the main switches and fuses for these lights fitted Engine Room

If in the spaces, how are they specially protected No

Are any switches or fuses fitted in bunkers No

Cargo light cables, whether portable or permanently fixed Portable How fixed Double

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel Double

How are the returns from the lamps connected to the hull No

Are all the joints with the hull in accessible positions No

Is the installation supplied with a voltmeter Yes, and with an amperemeter Yes, fixed 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 No

Are any switches, fuses, or joints of cables fitted in the pump room or companion No

How are the lamps specially protected in places liable to the accumulation of vapour or gas No

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.

for CLAUDE HAMILTON W. B. Bagot p. h. l. Electrical Engineers Date 15th April 20.

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 60 feet

Distance between dynamo or electric motors and steering compass 56 feet

The nearest cables to the compasses are as follows:—

Cable carrying	Amperes	feet from standard compass	feet from steering compass
A cable carrying <u>12</u>	<u>30</u>	<u>24</u>	<u>feet from steering compass</u>
A cable carrying <u>2</u>	<u>3</u>	<u>3</u>	<u>feet from steering compass</u>
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 any course in the case of the

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

W. J. Watson General Manager. AILSA SHIPBUILDING CO., LIMITED.

Builder's Signature.

Date 19th April 1920.

**GENERAL REMARKS.**

This Installation has been fitted on board under special survey. Tested under full working conditions & found satisfactory.

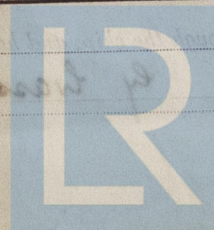
It is submitted that this vessel is eligible for

THE RECORD. ELEC. LIGHT. 6/5/20

J. S. Rankin. Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 27 APR 1920

Elec. Light



© 2020

Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

HC.  
26.4.20