

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 26453

Port of Glasgow Date of First Survey 23<sup>rd</sup> Dec/07 Date of Last Survey 19 April/08 No. of Visits 31  
 No. in Reg. Book on the Iron Steel 1/2 "DRATE" Port belonging to London  
 Built at Troon By whom The Ailsa S/B. Co. When built 1908  
 Owners The General Steam Navigation Co. Owners' Address London  
 Yard No. 184 Electric Light Installation fitted by Clarke Chapman & Co. Ltd. When fitted 1908

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

One Single Cylinder double acting open type vertical Engine direct coupled to a continuous current Compound wound dynamo.  
 Capacity of Dynamo 120 Amperes at 100 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed in Engine room Whether single or double wire system is used double  
 Position of Main Switch Board Near dynamo having switches to groups A. B. C. D. E. of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each Each light & groups of lights fitted with switches as required

If cut outs 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 cut outs fitted to both flow and return wires or cables of all circuits including lamp circuits yes  
 Are the cut outs of non-oxidizable metal yes and constructed to fuse at an excess of 50 per cent over the normal current  
 Are all cut outs 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 cut-outs constructed of incombustible materials and fitted on incombustible bases yes See also for alarm  
 Total number of lights provided for 98 arranged in the following groups:—

A	21	lights each of	16	candle power requiring a total current of	12.6	Amperes
B	25	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	14.4	Amperes
D	5	lights each of	32	candle power requiring a total current of	6	Amperes
E	23	lights each of	16	candle power requiring a total current of	13.8	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
4	Cargo lights of	6	— 16	candle power, whether incandescent or arc lights	in incandescent	

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

Where are the switches controlling the masthead and side lights placed on Signal lamp Indicator in Chartroom.

## DESCRIPTION OF CABLES.

Main cable carrying	70	Amperes, comprised of	37	wires, each	16	L.S.G. diameter,	.1168	square inches total sectional area
Branch cables carrying	15	Amperes, comprised of	4	wires, each	17	L.S.G. diameter,	.0169	square inches total sectional area
Branch cables carrying	5	Amperes, comprised of	4	wires, each	20	L.S.G. diameter,	.0070	square inches total sectional area
Leads to lamps carrying	.6	Amperes, comprised of	3	wires, each	22	L.S.G. diameter,	.0018	square inches total sectional area
Cargo light cables carrying	3.6	Amperes, comprised of	146	wires, each	38	L.S.G. diameter,	.00507	square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Not canvased in india-rubber, taped and braided, and lead covered overall. Where exposed steel armoured over the lead covering

Joints in cables, how made, insulated, and protected no joints except mechanical ones.

Are all the joints of cables thoroughly soldered, resin only having been used as a flux yes 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 yes, no.

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 and armoured fixed to underside of deck with strong clips



DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible no

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture lead covered and steel armoured

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

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

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

How are cables carried through beams in lead bushes through bulkheads, &c. in Bulkhead Glands

How are cables carried through decks in galvanized iron deck tubes

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 Lead covered and steel 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 cut outs for these lights fitted \_\_\_\_\_

If in the spaces, how are they specially protected \_\_\_\_\_

Are any switches or cut outs fitted in bunkers \_\_\_\_\_

Cargo light cables, whether portable or permanently fixed Portable How fixed to watertight Connection Boxes

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

How are the returns from the lamps connected to the hull \_\_\_\_\_

Are all the joints with the hull in accessible positions \_\_\_\_\_

The installation is now supplied with a voltmeter and an ammeter fixed main Switchboard

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and cut-outs fitted in positions not liable to the accumulation of petroleum vapour or gas —

Are any switches, cut outs, 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 100 per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 2500 megohms per statute mile after 24 hours' immersion in seawater.

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 Clarke, Chapman & Co. Ltd

J. D. Walker

Director

Electrical Engineers

Date

April 25<sup>th</sup> 1908

COMPASSES.

Distance between dynamo or electric motors and standard compass

72 feet

Distance between dynamo or electric motors and steering compass

65 .

The nearest cables to the compasses are as follows:—

A cable carrying	<u>.6</u>	Amperes	<u>6</u>	feet from standard compass	<u>12</u>	feet from steering compass
A cable carrying	<u>.6</u>	Amperes	<u>12</u>	feet from standard compass	<u>6</u>	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 any course in the case of the standard compass and nil degrees on any course in the case of the steering compass.

ALSA SHIPBUILDING CO. LIMITED.

Alfred A. Nicol

Secretary

Builder's Signature.

Date

1<sup>st</sup> May 1908

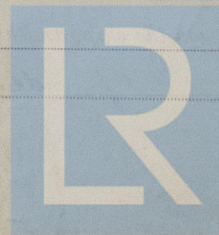
GENERAL REMARKS.

The electric lighting installation of this vessel has been carried out in a satisfactory manner and tested with all lights on.

Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute Glasgow -5 MAY 1908

Record Elec light.



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