

REPORT ON ELECTRIC LIGHTING INSTALLATION.

Port of Glasgow.Date of First Survey 23.2.1921 Date of Last Survey 27.11.21 No. of Visits 5No. in Reg. Book 20551Built at Ardrassan.

Port belonging to

Owners City of Cork St. Port Ltd.By whom The Ardrossan D.D. Co. Ltd.When built 1921.Yard No. 278Owners' Address Coast Lines Ltd.Electric Light Installation fitted by Messrs Campbell & Ishuwood When fitted 1921.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

— TOTAL K.W. : 40 —

2 - Howdens totally enclosed engines directly coupled to
2 C + I. Ltd. 4 Pole comp. Wound Dynamos

Capacity of Dynamo 200 Amperes at 100 Volts, whether continuous or alternating current ContinuousWhere is Dynamo fixed Engine Room Whether single or double wire system is used singlePosition of Main Switch Board do. having switches to groups seven of lights, &c., as belowPositions of auxiliary switch boards and numbers of switches on each
Engine Room 18 switches
Chart " 13 "

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 cessel is wired on the double wire system are fuses fitted to both flow and return wires or cables of all circuits including lamp circuits

Are the fuses of non-oxidizable metal Yes and constructed to fuse at an excess of 80 per cent over the normal currentAre all fuses fitted in easily accessible positions Yes Are the fuses of standard dimensions Yes If wire fuses are usedAre 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

Total number of lights provided for 270 arranged in the following groups :—

A	44	lights each of	16	candle power requiring a total current of	22	Amperes
B	22	lights each of	16	candle power requiring a total current of	11	Amperes
C	22	lights each of	16	candle power requiring a total current of	11	Amperes
D	48	lights each of	16	candle power requiring a total current of	24	Amperes
E	36	lights each of	16	candle power requiring a total current of	18	Amperes
2	Mast head light with	2 lamps each of	32	candle power requiring a total current of	2	Amperes
2	Side light with	2 lamps each of	32	candle power requiring a total current of	2	Amperes
4	Cargo lights of 24 1/2 - 16 . 2 - 1/2 Watt			candle power, whether incandescent or are lights	Incandescent	

If arc lights, what protection is provided against fire, sparks, &c. no arc lights fitted.Where are the switches controlling the masthead and side lights placed Chart Room.

DESCRIPTION OF CABLES.

Main cable carrying	200	Amperes, comprised of	34	wires, each	0.093	S.W.G. diameter,	2431	square inches total sectional area
Branch cables carrying	22	Amperes, comprised of	4	wires, each	0.036	S.W.G. diameter,	0040	square inches total sectional area
Branch cables carrying	24	Amperes, comprised of	4	wires, each	0.036	S.W.G. diameter,	0040	square inches total sectional area
Leads to lamps carrying	5	Amperes, comprised of	1	wires, each	0.044	S.W.G. diameter,	0015	square inches total sectional area
Cargo light cables carrying	3	Amperes, comprised of	108	wires, each	40	S.W.G. diameter,	—	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Lead covered Armoured & Braided

Joints in cables, how made, insulated, and protected no jointsAre 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 no.Are there any joints in or branches from the cable leading from dynamo to main switch board noHow are the cables led through the ship, and how protected L. b. a. + B.

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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 *L.C.A.B.*

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

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

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

How are cables carried through beams *Fibre Femules* through bulkheads, &c. *Brass Glans*

How are cables carried through decks *Galv. Steel Pipes*

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 *L. b. A. + B. + enclosed Fittings.*

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 *L. C. A. + B. enclosed Fittings*

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

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 *Couplings on Deck*

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

How are the returns from the lamps connected to the hull *Between Brass Washers*

Are all the joints with the hull in accessible positions *Yes.*

Is the installation supplied with a voltmeter *Yes.* and with an amperemeter *Yes.* fixed main 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.

Campbell & Isherwood Ltd.

Electrical Engineers

Date *22/11/21.*

COMPASSES.

Distance between dynamo or electric motors and standard compass

Approx. 100 feet.

Distance between dynamo or electric motors and steering compass

do.

The nearest cables to the compasses are as follows:—

A cable carrying	Ampères	feet from standard compass	feet from steering compass
<i>12</i>	<i>8</i>	<i>6</i>	
A cable carrying	Ampères	feet from standard compass	feet from steering compass
A cable carrying	Ampères	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 *—* course in the case of the standard compass and *—* degrees on *—* course in the case of the steering compass.

FOR THE HONORABLE SOCIETY OF THE ARDROSSAN DRY DOCK & SHIPBUILDING COY. LTD.

S. Aitken, Clerk.

Builder's Signature.

Date *29/11/21*

GENERAL REMARKS.

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

FEE £25.0.0 at 10/11/21

Elec. Light.

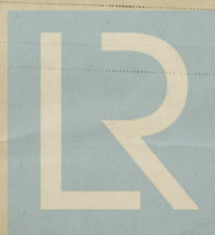
J. B. Rankin.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW - 6 DEC 1921

Elec. Light



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