

JUL 12 1921

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 10982.

Port of Saundersham Date of First Survey 13th May Date of Last Survey 9th June No. of Visits 4
 No. in Reg. Book 19207 on the Steel S.S. "CITY OF DUNEDIN" Port belonging to London
 Built at Bremen By whom Vulcan Works When built 1917
 Owners Ellerman Lines Ltd Owners' Address
 Card No. Electric Light Installation fitted by L When fitted L

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Compound, enclosed type engine, direct coupled to a 26 K.W. compound wound protected type dynamo.

Capacity of Dynamo 236 Amperes at 110 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed In Engine Room Whether single or double wire system is used Single
 Position of Main Switch Board In Engine Room having switches to groups A to E of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each None fitted.

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 L 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 L

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 L

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 244 arranged in the following groups:—

A	Accommodation	180	lights each of	16 C.P.	candle power requiring a total current of	95	Amperes
	Navigation	10	lights each of	32	candle power requiring a total current of	15	Amperes
	Wireless		lights each of	1/2 K.W. Capacity	candle power requiring a total current of	25-30	Amperes
D	Searchlight		lights each of		candle power requiring a total current of	35	Amperes
E	Engine Room	50	lights each of	16 & 32	candle power requiring a total current of	30	Amperes
2	Mast head lights with	1	lamp each of	32	candle power requiring a total current of	2	Amperes
2	Side lights with	1	lamp each of	32	candle power requiring a total current of	2	Amperes
8	Cargo lights of	96			candle power, whether incandescent or arc lights	Incandescent	

If arc lights, what protection is provided against fire, sparks, &c. L

Where are the switches controlling the masthead and side lights placed In wheelhouse.

DESCRIPTION OF CABLES.

	Amperes, comprised of	wires, each	S.W.G. diameter,	square inches total sectional area
Main cable carrying				
Branch cables carrying				
Branch cables carrying				
Leads to lamps carrying				
Cargo light cables carrying				

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cables in machinery spaces & where exposed to the weather & mechanical damage, are V.I.R. insulated, steel armoured & braided. In cabins etc. V.I.R. braided.

Joints in cables, how made, insulated, and protected None.

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances L 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 L

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 Clipped to bulkheads, beams etc. where armoured and run in wood casings in cabins etc.



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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 *None*

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

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

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

How are cables carried through beams *Plain holes*

How are cables carried through decks *W.T. Deck tubes*

Are any cables run through coal bunkers *No* or cargo spaces *No* or spaces which may be used for carrying cargo, stores, or baggage *yes*

If so, how are they protected *Steel armoured & braided*

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 fuses for these lights fitted *✓*

If in the spaces, how are they specially protected *No*

Are any switches or fuses fitted in bunkers *✓*

Cargo light cables, whether portable or permanently fixed *Portable* How fixed *Plugs fitted*

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

How are the returns from the lamps connected to the hull *Secured & washed*

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 on 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 *megohm 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.

Electrical Engineers Date

COMPASSES.

Distance between dynamo or electric motors and standard compass

110 feet

Distance between dynamo or electric motors and steering compass

100 feet

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>25</i>	<i>15</i>	<i>12</i>	<i>12</i>
<i>10</i>	<i>10</i>	<i>10</i>	<i>10</i>
<i>1</i>	<i>4</i>	<i>10</i>	<i>10</i>

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

standard compass and

degrees on

course in the case of the steering compass.

Builder's Signature. Date

GENERAL REMARKS.

The Electric Light Installation has been examined throughout, tried under working conditions and found satisfactory.

Electric Light

Recd 19/7/21

A.H. Boyle

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 22 JUL 1921

TUE. 9 AUG. 1921

FRI. 21 AUG 1925

FRI. MAR. 24 1922

FRI. 16 JAN 1925

TUE. 27 FEB. 1923

TUES. 10 MAR 1925

FRI 9 MAY 1924

TUES. 31 MAR 1925

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