

22 APR 1926

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 8563.

Port of Bunda Date of First Survey 22-2-26 Date of Last Survey 14-4-26 No. of Visits 9  
 No. in Reg. Book on the Iron or Steel S.S. Clonlara Port belonging to Limerick  
 Built at Dundee By whom Caledon S. & E. Co., Ltd. When built 1926  
 Owners LIMERICK Steamship Co. Owners' Address Limerick  
 Yard No. 298 Electric Light Installation fitted by Caledon S. & E. Co., Ltd., Dundee. When fitted 1926

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

8" X 7" Open Type Uniflow Steam Engine (Makers, H. Watson & Sons, Newcastle-on-Tyne)  
 coupled to a 10 KW 100 volt, 300 R.P.M. Compound wound Dynamos, (Makers, Sunderland Forge & Eng. Co., Sunderland.)  
 Capacity of Dynamo 90 Amperes at 110 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Starboard side Engine Room Whether single or double wire system is used Double wire

Position of Main Switch Board Starboard side Engine Room Having switches to groups six 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 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-oxidisable metal yes and constructed to fuse at an excess of 20% 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 160 arranged in the following groups:—

|    |                      |                |               |  |   |                      |
|----|----------------------|----------------|---------------|--|---|----------------------|
| A  | 37                   | lights each of | 40            | candle power requiring a total current of        | 13  | Amperes              |
| B  | 26                   | lights each of | 30            | candle power requiring a total current of        | 7   | Amperes              |
| C  | 50                   | lights each of | 30            | candle power requiring a total current of        | 13.5                                      | Amperes              |
| D  | 47                   | lights each of | 30            | candle power requiring a total current of        | 12  | Amperes              |
| E  | 224 Fans             | lights each of | 60 watts      | candle power requiring a total current of        | 1   | Amperes              |
| 1  | Mast head light with | 1              | lamps each of | 60   | candle power requiring a total current of | .8                   |
| 2  | Side light with      | 1              | lamps each of | 60   | candle power requiring a total current of | .8                   |
| 30 | Cargo lights of      |                | 30            | candle power, whether incandescent or arc lights |   | Metal Filament Lamps |

If arc lights, what protection is provided against fire, sparks, &c. No arc lamps fitted.

Where are the switches controlling the masthead and side lights placed Chart Room

## DESCRIPTION OF CABLES.

|                             |    |                       |    |             |     |                        |                                    |
|-----------------------------|----|-----------------------|----|-------------|-----|------------------------|------------------------------------|
| Main cable carrying         | 50 | Amperes, comprised of | 19 | wires, each | 064 | S.W.G. diameter, .0600 | square inches total sectional area |
| Branch cables carrying      | 10 | Amperes, comprised of | 7  | wires, each | 052 | S.W.G. diameter, .0145 | square inches total sectional area |
| Branch cables carrying      | 12 | Amperes, comprised of | 7  | wires, each | 036 | S.W.G. diameter, .0070 | square inches total sectional area |
| Leads to lamps carrying     | 2  | Amperes, comprised of | 3  | wires, each | 029 | S.W.G. diameter, .0020 | square inches total sectional area |
| Cargo light cables carrying | 3  | Amperes, comprised of | 3  | wires, each | 029 | S.W.G. diameter, .0020 | square inches total sectional area |

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cattle decks, Cargo Light Engine and Boiler Room, Lead covered, Armoured and Braided Cables  
 Accommodation and Deck Light Lead covered Cable.

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 ✓ Are all joints in accessible positions, none being made in bunks, 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 None

How are the cables led through the ship, and how protected Through beams with Lead Bush and on Gal. Perforated Trays.



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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 Lead covered and Armoured and Braided Cables.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat L.C.A. and B Cable

What special protection has been provided for the cables near boiler casings L.C.A. and B. Cable

What special protection has been provided for the cables in engine room L.C.A. and B. Cable

How are cables carried through beams With Lead Bushes through bulkheads, &c. W/T. Glands

How are cables carried through decks Gal. Iron Deck Pipes with Glands

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 Through Beam with Lead Bushes L.C.A. and B. Cable

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage None

If so, how are the lamp fittings and cable terminals specially protected None

Where are the main switches and fuses for these lights fitted None

If in the spaces, how are they specially protected None

Are any switches or fuses fitted in bunkers None

Cargo light cables, whether portable or permanently fixed Portable How fixed Klydos 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 ✓

Is the installation supplied with a voltmeter Yes, and with an amperemeter Yes, fixed On 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.

THE CALEDON SHIPBUILDING & ENGINEERING CO. LD

Electrical Engineers

Date 21<sup>st</sup> April 1926

COMPASSES.

Distance between dynamo or electric motors and standard compass 60'

Distance between dynamo or electric motors and steering compass 60'

The nearest cables to the compasses are as follows:—

A cable carrying 25 Amperes 6 feet from standard compass 6 feet from steering compass

A cable carrying Amperes feet from standard compass 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 No degrees on Any course in the case of the

standard compass and No degrees on Any course in the case of the steering compass.

THE CALEDON SHIPBUILDING & ENGINEERING CO. LD

Builder's Signature.

Date 21<sup>st</sup> April, 1926

GENERAL REMARKS.

This Installation has been fitted on board in an efficient, manner and in accordance with the Rules.

The materials & workmanship are sound & good.

It has been tried under working conditions and found satisfactory in all respects.

It is submitted that this vessel is eligible for THE RECORD. Elec. Light.

See £ 10-0-0.

Committee's Minute

Elec. Lt.

Surveyor to Lloyd's Register of Shipping.



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