

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 15,684.

Port of Leith Date of First Survey Sept 12<sup>th</sup> Date of Last Survey Oct 29<sup>th</sup> No. of Visits 4  
 No. in on the Iron or Steel St Sunbank Port belonging to London  
 Reg. Book Burnbank By whom Burnbank & Co When built 1919  
 Owners Sun Ship Co Ltd Owners' Address London  
 Yard No. 101 Electric Light Installation fitted by Moncreiffe Bros, Leven. When fitted 1919

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

1 8" x 6" open type steam engine coupled direct to 10 H.P. dynamo  
Speed 350 R.P.M.  
 Capacity of Dynamo 100 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 20 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-oxidizable 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 110 arranged in the following groups:—

A	<u>19</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>10</u>	Amperes
B	<u>8</u>	lights each of	<u>32</u>	candle power requiring a total current of	<u>8.8</u>	Amperes
C	<u>26</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>14.5</u>	Amperes
D	<u>28</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>15.6</u>	Amperes
E		lights each of		candle power requiring a total current of		Amperes
<u>1</u>	Mast head light with	<u>1</u>	lamps each of	<u>32</u>	candle power requiring a total current of	<u>1.1</u> Amperes
<u>2</u>	Side light with	<u>2</u>	lamps each of	<u>32</u>	candle power requiring a total current of	<u>2.2</u> Amperes
<u>5</u>	Cargo lights of		<u>100</u>	candle power, whether incandescent or arc lights	<u>incandescent</u>	

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

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

## DESCRIPTION OF CABLES.

Main cable carrying 100 Amperes, comprised of 19 wires, each 14 S.W.G. diameter, .09 square inches total sectional area  
 Branch cables carrying 15 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, .007 square inches total sectional area  
 Branch cables carrying Amperes, comprised of wires, each S.W.G. diameter, 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 20 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, .007 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

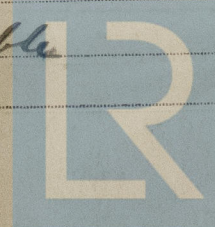
Insulated by V.T.R. 2 cores together, made circular with jute, wire  
armoured and braided overall to the specification of the  
Cable Makers Association

Joints in cables, how made, insulated, and protected All connections made in porcelain  
fittings made for this purpose

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



© 2020

Lloyd's Register  
Foundation



**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 no cables exposed

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

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

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

How are cables carried through beams armoured cable through bulkheads, &c. Packing glands

How are cables carried through decks 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

If so, how are they protected armoured cable

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 —

Are any switches or fuses fitted in bunkers —

Cargo light cables, whether portable or permanently fixed portable How fixed —

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

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 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.

Monroff Bros.

Electrical Engineers

Date 22<sup>nd</sup> Nov. 1914

**COMPASSES.**

Distance between dynamo or electric motors and standard compass

Distance between dynamo or electric motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	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

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.

Builder's Signature. Date

**GENERAL REMARKS.**

The electric light installations have been fitted in accordance with the Society's rules

It is submitted that this vessel is eligible for

T.B.B. RECORD

Elec. light.

W.R. 3/12/14

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

Committee's Minute