

WED. 22 JUN. 1914

REPORT ON ELECTRIC LIGHTING INSTALLATION. No.

Port of Sydney Date of First Survey 27. 10. 20 Date of Last Survey 22. 2 No. of Visits 12
 No. in on the Iron or Steel T.S.S. "MARELLA" Port belonging to London
 Reg. Book 15845 Built at Hamburg By whom Reichardt & Schiffs W. When built 1914
 Owners Burns Philp & Co. Ltd. Owners' Address Sydney, N.S.W.
 Yard No. Electric Light Installation fitted by Siemens When fitted 1914

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Three Duplicate Sets, Vertical Compound Steam Engines, driving.
Three Compound Wound Dynamos, ages fore and aft. No oil Fuel!
 Capacity of Dynamos 300 each Amperes at 110 each Volts, whether continuous or alternating current Continuous
 Where ~~is~~ Dynamos fixed In Engine Room Thrust Recess.
 Position of Main Switch Board Engine Room T. Recess. having switches to groups 16 in number of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each One in Captains alleyway, Chart Room
Boat Deck, Music Room, Smoke Room, Promenade Deck, First Saloon
Engineers Alleyway, Shelter deck, Crews Quarters. Five on Upper dk. 4 Engine Room
 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 Loop System and to each ~~lamp~~ ^{FAN} circuit only!
 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 Single
Except Navigation, Boat and Music Room, doubled back for a length of 60 feet.
 Are the cut outs of non-oxidizable metal Yes and constructed to fuse at an excess of 15% 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.

Total number of lights provided for 1193 arranged in the following groups:—

A	80	lights each of	20	Watts	candle power requiring a total current of	16.0	Amperes
A'	132		20	"		26.4	"
B	82	lights each of	20	"	candle power requiring a total current of	16.5	Amperes
B'	122		20	"		24.4	"
C	79	lights each of	20	"	candle power requiring a total current of	15.8	Amperes
C'	57		20	"		11.4	"
D	77	lights each of	20	"	candle power requiring a total current of	15.4	Amperes
D'	87		20	"		17.4	"
E	95	lights each of	20	"	candle power requiring a total current of	19.0	Amperes
E'	93		20	"		18.6	"
Navigation Mast head lights with 9 lamps each of		32	Carbon		candle power requiring a total current of	7.2	Amperes
2 Side light with 2 lamps each of		2	Carbon		candle power requiring a total current of	18.1	Amperes

Sixteen Cargo lights of 6 Lamps, each 16 candle power, whether incandescent or are lights Incandescent.

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

In Chart House

Where are the switches controlling the masthead and side lights placed

F	76	20 Watt Lamps	13.75
F'	31	20 " "	5.50
G	29	20 " "	5.25
G'	26	20 " "	4.75
H	24	20 " "	4.50

33.75

DESCRIPTION OF CABLES.

Main cable carrying 270 Amperes, comprised of 61 wires, each 13 L.S.G. diameter, .406 square inches total sectional area
 Branch cables carrying 5.5 Amperes, comprised of 7 wires, each 18 L.S.G. diameter, .0125 square inches total sectional area
 Branch cables carrying 26.4 Amperes, comprised of 7 wires, each 15 L.S.G. diameter, .028 square inches total sectional area
 Leads to lamps carrying .25 Amperes, comprised of 1 wires, each 16 L.S.G. diameter, .0064 square inches total sectional area
 Cargo light cables carrying 10.5 Amperes, comprised of 7 wires, each 20 L.S.G. diameter, .0070 square inches total sectional area

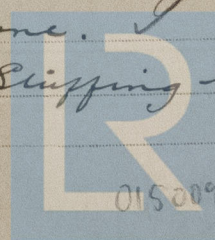
DESCRIPTION OF INSULATION, PROTECTION, ETC.

Over tinned Electric Wiring, Pure Rubber, Rubber Tape, Braid, Lead
jute yarn preparation, two layers of Steel Tape, jute preparation,
braiding and armoured where necessary.
 Joints in cables, how made, insulated, and protected None Continuous wires to Boxes.

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.

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 Armoured wire, Slipping boxes, and
Bitumastic.



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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 *Brass Watertight Boxes*

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

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

What special protection has been provided for the cables in engine room *Armoured wire*

How are cables carried through beams *Armoured wire* through bulkheads, &c. *Arm Wire Slipping Boxes*

How are cables carried through decks *18" pipe above deck filled with Bitumastic*

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

If so, how are they protected *Armoured wire and Brass W.T. 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 *Airtight fittings*

Where are the main switches and cut outs for these lights fitted *In Station Boxes in Engine Room*

If in the spaces, how are they specially protected *Armoured wire*

Are any switches or cut outs fitted in bunkers *No*

Cargo light cables, whether portable or permanently fixed *Portable* How fixed *On W.T. Plugs*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *To bottom of Field Magnets*

How are the returns from the lamps connected to the hull *1/4" Whitworth Brass Screws*

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

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 installation is *3 Voltmeters* supplied with a voltmeter and *3 Amperemeters* an amperemeter, fixed on Main Switch board

The copper used is guaranteed to have a conductivity of ☒ per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than ☒ 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.

Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass *200 Feet*

Distance between dynamo or electric motors and steering compass *200 Feet*

The nearest cables to the compasses are as follows:—

Cable	Amperes	Feet from standard compass	Feet from steering compass
A cable carrying 16	Amperes	22.0"	20.0"
A cable carrying 10.5	Amperes	6.0"	6.0"
A cable carrying <input checked="" type="checkbox"/>	Amperes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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 *Nil* course in the case of the standard compass and *Nil* degrees on *Nil* course in the case of the steering compass.

Builder's Signature.

Date

GENERAL REMARKS.

This Electric Lighting Installation has been examined, sizes of wiring checked on board, appears of good quality and workmanship, and has been seen running well under working conditions.

A. C. Heron

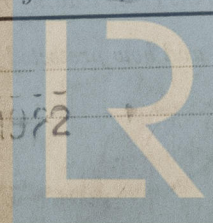
Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

FRI. 10 FEB. 1922

TUE 28 FEB. 1922

LM. MAY. 19 1922



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