

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 3861(6).

Port of **MELBOURNE** Date of First Survey 21st Sept Date of Last Survey 25th Sept No. of Visits 5
 No. in on the ~~Iron~~ Steel S.S. "LUTANA" Port belonging to Melbourne
 Reg. Book 26233 Built at Westerbrook By whom E. J. Smit & Zoon When built 1922
 Owners W. Holyman & Sons Pty Ltd Owners' Address
 Yard No. - Electric Light Installation fitted by J. E. Carroll, Melbourne When fitted 1925

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Vertical high speed engine $4\frac{1}{2}$ " dia, $3\frac{1}{2}$ " stroke, direct coupled to four pole compound wound generator (Makers - Brown Boveri, Kristiania)

Capacity of Dynamo 30 Amperes at 110 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Starboard side of Engine room Whether single or double wire system is used double

Position of Main Switch Board Above dynamo in Eng room having switches to groups A, B, C & D of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Aux Boards with fuses only in - Saloon, Crews mess room, Chart room & Engineers room

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

Are the fuses of non-oxidizable metal Yes and constructed to fuse at an excess of 25 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 80 arranged in the following groups :-

A	<u>24</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>6</u>	Amperes
B	<u>20</u>	lights each of	"	candle power requiring a total current of	<u>5</u>	Amperes
C	<u>18</u>	lights each of	<u>16 & 50</u>	candle power requiring a total current of	<u>6</u>	Amperes
D	<u>18</u>	lights each of	" " "	candle power requiring a total current of	<u>6</u>	Amperes
E	-	lights each of	-	candle power requiring a total current of	-	Amperes
<u>2</u>	Mast head light with	<u>2</u> lamps each of	<u>50</u>	candle power requiring a total current of	<u>2</u>	Amperes
<u>2</u>	Side light with	<u>2</u> lamps each of	<u>50</u>	candle power requiring a total current of	<u>2</u>	Amperes
<u>4</u>	Cargo lights of		<u>100</u>	candle power, whether incandescent or are 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 Navigation bridge

DESCRIPTION OF CABLES.

Main cable carrying 30 Amperes, comprised of 7 wires, each 18 S.W.G. diameter, 0.125 square inches total sectional area
 Branch cables carrying 23 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, 0.070 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 1 wires, each 16 S.W.G. diameter, 0.032 square inches total sectional area
 Cargo light cables carrying - Amperes, comprised of - wires, each - S.W.G. diameter, - square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

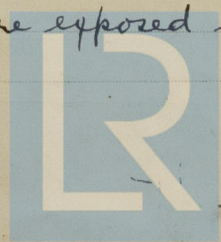
All cables in holds & machinery spaces are 600 meg C.M.A., encased in galv! screwed pipe where exposed. In other parts of ship - lead covered cable.

Joints in cables, how made, insulated, and protected looped in junction boxes

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 yes

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 beams & where exposed in water pipe with screwed connections



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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* ✓
 What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *lead covered* ✓
 What special protection has been provided for the cables near boiler casings " "
 What special protection has been provided for the cables in engine room *lead covered* ✓
 How are cables carried through beams ^{holes} *fitted with lead bushes* ✓ through bulkheads, &c. ✓
 How are cables carried through decks ⁱⁿ *screwed pipe with flanges at deck* ✓
 Are any cables run through coal bunkers *yes* or cargo spaces *yes* or spaces which may be used for carrying cargo, stores, or baggage —
 If so, how are they protected *In galv. screwed pipe with water tight joints* ✓
 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 *no* ✓
 Cargo light cables, whether portable or permanently fixed *portable flexibles* How fixed *plugs on bulkheads* ✓
 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 *main switch board*

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 *2000* 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.

COMPASSES.

Distance between dynamo or electric motors and standard compass *ONE Cent. 3848* *Cent 2000* approx *100 ft*
 Distance between dynamo or electric motors and steering compass " *95 ft*
 The nearest cables to the compasses are as follows:—

A cable carrying	5	Amperes	<i>five</i> feet from standard compass	<i>for lighting</i> feet from steering compass
A cable carrying	2	Amperes	<i>ten</i> feet from standard compass	<i>five</i> 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* — by Navigation Dept. Officer & Certificate issued
 The maximum deviation due to electric currents, etc., was found to be *no apparent deviation* ✓ course in the case of the
 standard compass and *no apparent deviation* ✓ course in the case of the steering compass.

Cyril Holyman

Owners Representative
 Builder's Signature.

Date *25/9/25*

GENERAL REMARKS.

This electric installation has been fitted in accordance with the Rules tested & found satisfactory — the Vessel is now eligible to have notation of Electric Light fitted.
It is submitted that this vessel is eligible for.
 THE RECORD. *Plc Light*
T. 3/1/25

Fee £5-5-

Surveyor to Lloyd's Register of Shipping.

Committee's Minute



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