

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 9743

Port of Madras Date of First Survey and Date of Last Survey while Building No. of Visits 1
 No. in Reg. Book on the Iron or Steel 117 Trims Port belonging to Misses Brang Taylor & Co When built 1917
 Built at Stockholm By whom Misses Brang Taylor & Co Owners' Address Baldiff When fitted 1917
 Yard No. 183 Electric Light Installation fitted by Falvorn Cross & Co.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

7 x 6 Open type engine to work with 100 lbs per sq steam pressure & coupled direct to compound wound dynamo running @ 350 R.P.M. (Six pole - compound)
 Capacity of Dynamo 93 Amperes at 110 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Starting Platform Whether single or double wire system is used double
 Position of Main Switch Board Next dynamo having switches to groups A. B. C. D. E. of lights, &c., as below
 Positions of auxiliary switch boards and numbers of fuses on each 2 x 5 Way in Midship lathroom
1 x 7 Way in lathroom, 1 x 7 Way in Engineers Pantry, 1 x 7 Way in Prop.
1 x 6 " " Engine 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 yes
 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 134 arranged in the following groups :-

A <u>Midships</u> <u>2</u> <u>49</u> lights each of <u>16</u> candle power requiring a total current of <u>26.7</u> Amperes
B <u>Engineers</u> <u>2</u> <u>29</u> lights each of <u>"</u> candle power requiring a total current of <u>15.8</u> Amperes
C <u>Up</u> <u>32</u> lights each of <u>"</u> candle power requiring a total current of <u>17.4</u> Amperes
D <u>Machinery</u> <u>24</u> lights each of <u>"</u> candle power requiring a total current of <u>13</u> Amperes
E <u>Wireless</u> lights each of <u>"</u> candle power requiring a total current of <u>"</u> Amperes
<u>2</u> Mast head lights with <u>1</u> lamp each of <u>32</u> candle power requiring a total current of <u>2.1</u> Amperes
<u>2</u> Side lights with <u>1</u> lamp each of <u>"</u> candle power requiring a total current of <u>2.1</u> Amperes
<u>6</u> Cargo lights of <u>5 + 16</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 lathroom

DESCRIPTION OF CABLES.

Main cable carrying <u>93</u> Amperes, comprised of <u>14</u> wires, each <u>14</u> S.W.G. diameter, <u>.0945</u> square inches total sectional area
Branch cables carrying <u>26.7</u> Amperes, comprised of <u>7</u> wires, each <u>15</u> S.W.G. diameter, <u>.0282</u> square inches total sectional area
Branch cables carrying <u>17.5</u> Amperes, comprised of <u>7</u> wires, each <u>16</u> S.W.G. diameter, <u>.0213</u> square inches total sectional area
Leads to lamps carrying <u>34</u> Amperes, comprised of <u>1</u> wires, each <u>18</u> S.W.G. diameter, <u>.0018</u> square inches total sectional area
Cargo light cables carrying <u>2.7</u> Amperes, comprised of <u>3</u> wires, each <u>20</u> S.W.G. diameter, <u>.0032</u> square inches total sectional area

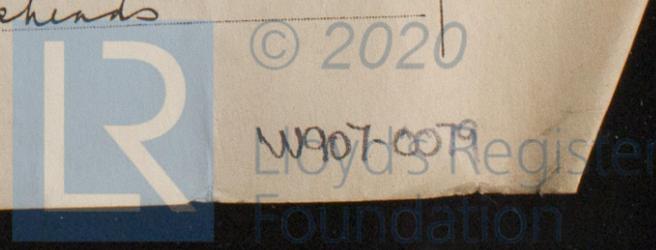
DESCRIPTION OF INSULATION, PROTECTION, ETC.

Tinned copper, Pure Para rubber, Yule J.R. taped, braided + compounded.
Lead covered in battery, Armoured + Braided elsewhere

Joints in cables, how made, insulated, and protected

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 Armoured + braided cables run through beams + clipped up under decks, or across bulkheads



DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible Generally

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture In main part of mast

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

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

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

How are cables carried through beams Fibre bushes through bulkheads, &c. W. J. glands

How are cables carried through decks Deck tubes

Are any cables run through coal bunkers Yes or cargo spaces Yes or spaces which may be used for carrying cargo, stores, or baggage Yes

If so, how are they protected Armoured - Banded

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 How fixed W. J. sockets

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 Main 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 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.

Galeman Crowder Electrical Engineers Date 11/5/17

COMPASSES.

Distance between dynamo or electric motors and standard compass 96 ft

Distance between dynamo or electric motors and steering compass 88 "

The nearest cables to the compasses are as follows:—

A cable carrying	<u>10.9</u>	Amperes	<u>10</u>	feet from standard compass	<u>10</u>	feet from steering compass
A cable carrying	<u>5.4</u>	Amperes	<u>1</u>	feet from standard compass	<u>1</u>	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 nil degrees on all courses in the case of the standard compass and nil degrees on all courses in the case of the steering compass.

For CRAIG, TAYLOR & CO. LIMITED
William Young DIRECTOR, Builder's Signature. Date 16.5.17

GENERAL REMARKS.

This installation has been fitted in accordance with the Rules. The materials & workmanship are good and on completion was tested under full working conditions & found satisfactory.

It is submitted that this vessel is eligible to

THE RECORD. Elec. light. JWD 18/5/17
Wm Morrison Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute FRI. 25 MAY. 1917

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

Im. 9. 12. Transfer.

