

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 12231

Port of *Panama* Date of First Survey *24 Aug 1912* Date of Last Survey *16 March 1912* No. of Visits *4*  
 No. in Reg. Book *on the Iron or Steel Twin Screw S.S. SCALA SHELL* Port belonging to *London*  
 Built at *Dumbarton* By whom *the Shell* When built *1912*  
 Owners *Anglo-Siam Co* Owners' Address *London*  
 Yard No. *Electric Light Installation fitted by Sunderland Engineering Co* When fitted *1912*

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

*Compound wound direct coupled steam driven dynamo.*

Capacity of Dynamo *100* Amperes at *100* Volts, whether continuous or alternating current *continuous*

Where is Dynamo fixed *in engine room* Whether single or double wire system is used *double*

Position of Main Switch Board *Facing dynamo* having switches to groups *4* of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each *chart room, saloon and forward engine room aft. Misch.*

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 *100* 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 *133* arranged in the following groups:—

A <i>navigation</i>	<i>18</i> lights each of <i>9-10-12</i>	candle power requiring a total current of <i>10.75</i>	Amperes
B <i>saloon</i>	<i>52</i> lights each of <i>16</i>	candle power requiring a total current of <i>26</i>	Amperes
C <i>E.A. aft</i>	<i>63</i> lights each of <i>16</i>	candle power requiring a total current of <i>31</i>	Amperes
D <i>Misch.</i>	lights each of	candle power requiring a total current of <i>23</i>	Amperes
E	lights each of	candle power requiring a total current of	Amperes
<i>2</i>	Mast head light with <i>1</i> lamps each of <i>32</i>	candle power requiring a total current of <i>2.34</i>	Amperes
<i>2</i>	Side light with <i>1</i> lamps each of <i>32</i>	candle power requiring a total current of <i>2.34</i>	Amperes
<i>6</i>	Cargo lights of <i>6-12</i>	candle power, whether incandescent or arc lights <i>incandescent</i>	

If arc lights, what protection is provided against fire, sparks, &c. *no arc lights*

Where are the switches controlling the masthead and side lights placed *in chart room*

## DESCRIPTION OF CABLES.

Main cable carrying *100* Amperes, comprised of *17* wires, each *.072* S.W.G. diameter, *0.1478* square inches total sectional area

Branch cables carrying *10.75* Amperes, comprised of *7* wires, each *.036* S.W.G. diameter, *0.00701* square inches total sectional area

Branch cables carrying *26* Amperes, comprised of *7* wires, each *.044* S.W.G. diameter, *0.01046* square inches total sectional area

Leads to lamps carrying *31* Amperes, comprised of *7* wires, each *.044* S.W.G. diameter, *0.01046* square inches total sectional area

Cargo light cables carrying *33* Amperes, comprised of *3* wires, each *0.039* S.W.G. diameter, *0.002* square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

*Cables in pipes insulated and lead covered in machinery spaces lead covered and armoured in accommodation lead covered*

Joints in cables, how made, insulated, and protected *waterlight 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 *none made*

How are the cables led through the ship, and how protected *steel pipes and lead covered*



© 2020

Lloyd's Register

W601-0268



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 tubes*

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

What special protection has been provided for the cables near boiler casings *armoured and lead covered*

What special protection has been provided for the cables in engine room *armoured and lead covered*

How are cables carried through beams *Fibre bushes* through bulkheads, &c. *W.T. glances*

How are cables carried through decks *deck tubes*

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

If so, how are they protected *✓*

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 *hose shoe connected*

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 *yes*

Are any switches, fuses, or joints of cables fitted in the pump room or companion *no*

How are the lamps specially protected in places liable to the accumulation of vapour or gas *gas tight glass bowls*

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 \_\_\_\_\_ 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.

p.pro. THE SUNDERLAND FORGE & ENGINEERING CO. LTD

Electrical Engineers

Date 6th April 1922.

COMPASSES.

Director.

Distance between dynamo or electric motors and standard compass *172 ft*

Distance between dynamo or electric motors and steering compass *172 ft*

The nearest cables to the compasses are as follows:—

A cable carrying *8.5* Amperes *8* feet from standard compass *6* feet from steering compass

A cable carrying *0.56* Amperes *6* feet from standard compass *6* feet from steering compass

A cable carrying *2.56* Amperes *led into* feet from standard compass *6* 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 *every* course in the case of the standard compass and *nil* degrees on *every* course in the case of the steering compass.

ROTTERDAMSCHЕ DRUGBOEK WAAFSCHAPPIJ

DIRECTEUR

Builder's Signature. Date 13 April 1922

GENERAL REMARKS.

The installation has been fitted in accordance with the Rules. It has worked very satisfactorily during a trial and given in my opinion the approval of the Committee.

It is submitted that this vessel is eligible for

THE RECORD. Elec. Light.

22/19/4/22.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



© 2020

Lloyd's Register Foundation