

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 24221

Port of Suez Date of First Survey Aug 12 Date of Last Survey Sept 13 No. of Visits 8  
 No. in Reg. Book 4 Supp on the ~~Iron~~ Steel S/S FACI Port belonging to Tangier  
 Built at Pelby By whom Lochran & Son When built 1911  
 Owners G Guist Owners' Address Tangier  
 Yard No. 499 Electric Light Installation fitted by Campbell & Sherman When fitted 1911

### DESCRIPTION OF DYNAMO, ENGINE, ETC.

Mounted enclosed single cylinder engine direct coupled to a four pole compound wound continuous current dynamo  
 Capacity of Dynamo 40 Amperes at 100 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed Engine room near Starboard Whether single or double wire system is used Single  
 Position of Main Switch Board Close to dynamo having switches to groups Four of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each Engine room (4) Chartroom (5)

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 Yes and to each lamp circuit Yes  
 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 Yes  
 Are the cut outs of non-oxidizable metal Yes and constructed to fuse at an excess of 75% 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 29 arranged in the following groups:—  
 A Engine room - aft lights each of 10916 - 1932 candle power requiring a total current of 6.6 Amperes  
 B Chartroom lights each of 6916 - 3932 candle power requiring a total current of 6.6 Amperes  
 C Ind. lights each of 9716 candle power requiring a total current of Amperes  
 D lights each of Amperes  
 E lights each of Amperes  
 / Mast head light with / lamps each of 32 candle power requiring a total current of Included in B Amperes  
 2 Side light with / lamps each of 32 candle power requiring a total current of 5 Amperes  
 / Cargo lights of / candle power, whether incandescent or arc lights Amperes

If arc lights, what protection is provided against fire, sparks, &c. None fitted  
 Where are the switches controlling the masthead and side lights placed Chartroom

### DESCRIPTION OF CABLES.

Main cable carrying 18 Amperes, comprised of 7 wires, each 14 L.S.G. diameter, .035 square inches total sectional area  
 Branch cables carrying 6.6 Amperes, comprised of 7 wires, each 20 L.S.G. diameter, .007 square inches total sectional area  
 Branch cables carrying 6.6 Amperes, comprised of 7 wires, each 20 L.S.G. diameter, .007 square inches total sectional area  
 Leads to lamps carrying 1.6 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, .0018 square inches total sectional area  
 Cargo light cables carrying - Amperes, comprised of - wires, each - L.S.G. diameter, - square inches total sectional area

### DESCRIPTION OF INSULATION, PROTECTION, ETC.

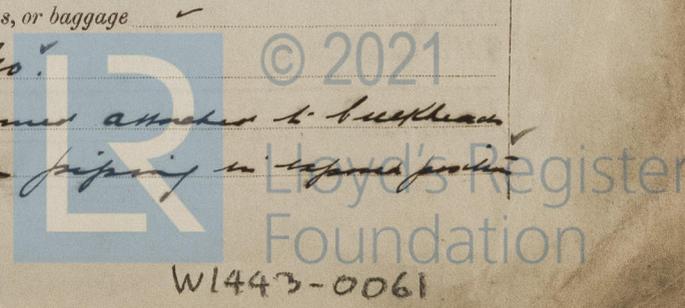
Lead covered & tinned over vulcanized rubber, lead covered & ammal  
Tapes & bands over vulcanized rubber in iron pipes

Joints in cables, how made, insulated, and protected None made

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 bunks, 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 Lead covered & ammal covered to bulkhead & ceiling etc by screwed iron clips & this wire piping is supported



**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 *Secured in pipe* ✓

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

What special protection has been provided for the cables near boiler casings *5*

What special protection has been provided for the cables in engine room *5*

How are cables carried through beams *Like timber* ✓ through bulkheads, &c. *waterlight-glands* ✓

How are cables carried through decks *Waterlight deck pipes* ✓

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 *Secured in pipe* ✓

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 cut outs for these lights fitted ✓

If in the spaces, how are they specially protected ✓

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

Cargo light cables, whether portable or permanently fixed *None* ✓ 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 ✓

The installation is \_\_\_\_\_ supplied with a voltmeter and \_\_\_\_\_ an amperemeter, fixed *in Main Bridge* ✓

**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 copper used is guaranteed to have a conductivity of *100* ✓ per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than *1000* ✓ 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.

*Campbell & Sherwood Ltd* Electrical Engineers Date *13 Oct 1911*

**COMPASSES.**

Distance between dynamo or electric motors and standard compass *about 50 ft*

Distance between dynamo or electric motors and steering compass *about 40 ft*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>5.5</i>	Amperes	<i>1</i>	feet from standard compass	<i>1</i>	feet from steering compass
A cable carrying	<i>1.6</i>	Amperes	<i>6</i>	feet from standard compass	<i>6</i>	feet from steering compass
A cable carrying	<i>6.6</i>	Amperes	<i>9</i>	feet from standard compass	<i>9</i>	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 \_\_\_\_\_ course in the case of the standard compass and \_\_\_\_\_ degrees on \_\_\_\_\_ course in the case of the steering compass.

*Bochmare & Sons* Builder's Signature. Date *14th Nov 1911*

**GENERAL REMARKS.** *This installation of electric lights has been well fitted. The materials & workmanship are good. It has been tried under full working conditions found satisfactory.*

*It is admitted that this vessel is eligible for THE RECORD. Elec. light. JWD 16/11/11*

*John W. Foyne*  
Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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