

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 24395

Port of Hull Date of First Survey Nov 22<sup>nd</sup> Date of Last Survey Dec 1<sup>st</sup> No. of Visits 8  
 No. in Reg. Book 3744 on the ~~Iron~~ Steel S/S MEKNASSI Port belonging to Tangier  
 Built at Belby By whom Bochmansons When built 1911  
 Owners G. Golot Owners' Address Tangier  
 Yard No. 501 Electric Light Installation fitted by Sampbell, Isherwood When fitted 1911

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Inverted 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 the side Whether single or double wire system is used Double  
 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 cessel 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 lights each of 10 of 16 + 1 of 32 candle power requiring a total current of 6.6 Amperes  
 B Chartroom lights each of 6 of 16 + 3 of 32 candle power requiring a total current of 6.6 Amperes  
 C Forward lights each of 9 of 16 candle power requiring a total current of          Amperes  
 D          lights each of          candle power requiring a total current of          Amperes  
 E          lights each of          candle power requiring a total current of          Amperes  
 1 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

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 16 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.

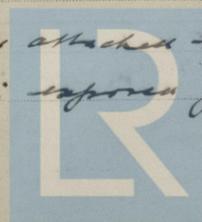
Lead covered braided over vulcanized rubber, lead covered - armoured  
Tape - braided over vulcanized rubber in iron piping

Joints in cables, how made, insulated, and protected Iron 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 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 Yes

How are the cables led through the ship, and how protected Lead covered + armoured attached to bulkheads casing in by screwed iron clips + this iron piping is exposed protection



**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 enamel ammonia ✓

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 tubes ✓ through bulkheads, &c. Water-tight glands ✓

How are cables carried through decks Water-tight deck pipe ✓

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 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 -

Cargo light cables, whether portable or permanently fixed Good 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 on Main trunk ✓

**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 & Shennard Ltd Electrical Engineers Date 8th Dec 1911

**COMPASSES.**

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

Distance between dynamo or electric motors and steering compass 40 ft

The nearest cables to the compasses are as follows:—

A cable carrying	<u>55</u>	Amperes	<u>1</u>	feet from standard compass	<u>1</u>	feet from steering compass
A cable carrying	<u>1.6</u>	Amperes	<u>6</u>	feet from standard compass	<u>6</u>	feet from steering compass
A cable carrying	<u>6.6</u>	Amperes	<u>9</u>	feet from standard compass	<u>9</u>	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.

Cochrane & Sons Builder's Signature. Date 12th December 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 submitted that this vessel is eligible for THE RECORD.

J.W.D. 19/12/11 Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



50,811.—Transfer.