

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 21832

Port of Hull Date of First Survey Oct. 12 1909 Date of Last Survey Oct 18<sup>th</sup> 1909 No. of Visits 5  
 No. in Reg. Book 32 Supp. Built at Selby By whom Bocheane & Son When built 1909  
 Owners Empresa de Pesca Marit Limitada Owners' Address London  
 Yard No. 456 Electric Light Installation fitted by Campbell & Sherwood When fitted 1909

**DESCRIPTION OF DYNAMO, ENGINE, ETC.**

A Campbell & Sherwood standard four pole compound wound dynamo direct coupled to a Robey engine.

Capacity of Dynamo 35 Amperes at 100 Volts, whether continuous or alternating current continuous

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

Position of Main Switch Board on fore bulkhead having switches to groups 3 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Engine room 3 Wheelhouse 5 Camp- room 5 & a switch in a convenient position to each light

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-oxidisable 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 30 of 16 cp 6 of 32 arranged in the following groups:—

A	Engine room	lights each of	6 of 16	candle power requiring a total current of	3.38	Amperes
B	Aft	lights each of	7 of 16 1 of 32	candle power requiring a total current of	4.95	Amperes
C	Cargo	lights each of	13 of 16	candle power requiring a total current of	7.15	Amperes
D	Navigation	lights each of	4 of 16 5 of 32	candle power requiring a total current of	7.7	Amperes
E		lights each of		candle power requiring a total current of		Amperes
1	Mast head light with	1 lamp each of	32	candle power requiring a total current of	included in D	Amperes
2	Side light with	1 lamp each of	32	candle power requiring a total current of	" " D	Amperes
2	Cargo lights of	4 of 16 in each		candle power, whether incandescent or arc lights	incandescent	

If arc lights, what protection is provided against fire, sparks, &c.

Where are the switches controlling the masthead and side lights placed Wheelhouse

**DESCRIPTION OF CABLES.**

Main cable carrying 23.0 Amperes, comprised of 19 wires, each 18 L.S.G. diameter, .034 square inches total sectional area

Branch cables carrying 8.7 Amperes, comprised of 7 wires, each 19 L.S.G. diameter, .0087 square inches total sectional area

Branch cables carrying 7.15 Amperes, comprised of 7 wires, each 30 L.S.G. diameter, .0071 square inches total sectional area

Leads to lamps carrying .55 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, .0018 square inches total sectional area

Cargo light cables carrying 2.2 Amperes, comprised of 108 wires, each 38 L.S.G. diameter, .0031 square inches total sectional area

**DESCRIPTION OF INSULATION, PROTECTION, ETC.**

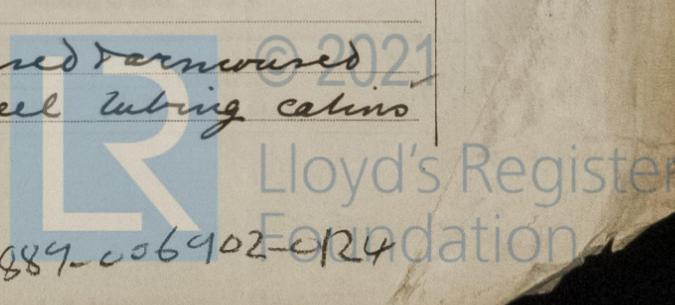
Engine room lead covered & armoured fishroom bunks & exposed positions vulcanised in heavy gauge screwed steel tubing cabins vulcanised in wood casings

Joints in cables, how made, insulated, and protected soldered & insulated with rubber tape protected with preservative tape & compound

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 Engine room lead covered & armoured fishroom bunks & exposed positions screwed steel tubing cabins wood casings.



**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 screwed steel tubing galvanised

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat lead covered & armoured

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

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

How are cables carried through beams filin ferrules through bulkheads, &c. waterlight glands

How are cables carried through decks flanged deck pipes

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 screwed steel tubing galvanised Lead covered - armoured in the bunkers

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 portable How fixed special watertight connections

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel screw of ample area into frame of dynamo

How are the returns from the lamps connected to the hull trans lap screw of ample area

Are all the joints with the hull in accessible positions yes

The installation is also supplied with a voltmeter and also an amperemeter, fixed on main board

**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 2500 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 & Shurwood Electrical Engineers. Date Oct. 25th 1909.

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 70 ft

Distance between dynamo or electric motors and steering compass 75 ft

The nearest cables to the compasses are as follows:—

A cable carrying	<u>5.5</u>	Amperes	<u>3</u>	feet from standard compass	<u>3</u>	feet from steering compass
A cable carrying	<u>4.40</u>	Amperes	<u>10</u>	feet from standard compass	<u>6</u>	feet from steering compass
A cable carrying	<u>8.7</u>	Amperes	<u>15</u>	feet from standard compass	<u>11</u>	feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power \_\_\_\_\_

The maximum deviation due to electric currents, etc., was found to be \_\_\_\_\_ degrees on \_\_\_\_\_ course in the case of the standard compass and \_\_\_\_\_ degrees on \_\_\_\_\_ course in the case of the steering compass.

Bochman & Sons Builder's Signature. Date 24th Oct 1909

**GENERAL REMARKS.**

This installation of electric light has been well fitted. The materials & workmanship are good. It has been tried under working conditions & found satisfactory.

is submitted and this vessel is eligible for THE RECORD, Elec. light.

J.W. Gwynne Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute



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