

# REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 30779

Port of Glasgow Date of First Survey 5<sup>th</sup> July 1911 Date of Last Survey 7<sup>th</sup> Aug. 1911 No. of Visits 8  
 No. in Reg. Book PLA Dredger No. 5 Port belonging to London  
 Built at Radley By whom Herring & Ferguson When built July  
 Owners P. L. A. Owners' Address London  
 Yard No. 399 Electric Light Installation fitted by Telford & Mackay When fitted 1911

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Direct coupled single cylinder Engine  
open Type. & Level compound wound Dynamo 56 amp. 110V. 350 Revs.  
 Capacity of Dynamo 50 Amperes at 100 Volts, whether continuous or alternating current continuous  
 Where is Dynamo fixed Starboard Side Whether single or double wire system is used Double  
 Position of Main Switch Board ast Bulkhead having switches to groups 9 of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each None

*New generator fitted with 9 lamps renewed 10/30 Low 14/143*

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

Are the cut outs of non-oxidizable metal Yes and constructed to fuse at an excess of 100 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 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 buses Yes

Total number of lights provided for 73 arranged in the following groups:—

A	main & room lights each of	9-16 cp	candle power requiring a total current of	5.4	Amperes
B	Roosting & Room lights each of	3-16 cp.	candle power requiring a total current of	1.8	Amperes
C	Officers lights each of	9-16 cp.	candle power requiring a total current of	5.4	Amperes
D	Head Workshop lights each of	6-16 cp.	candle power requiring a total current of	3.6	Amperes
E	Deck & Hold lights each of	15-32 cp.	candle power requiring a total current of	1.8	Amperes
	Galley & 20 C.P. Mast head light with	8-16 cp.	candle power requiring a total current of	3.6	Amperes
	Side light with		candle power requiring a total current of	4.8	Amperes
	Cargo lights of		candle power, whether incandescent or arc lights		

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

Where are the switches controlling the masthead and side lights placed No lights fitted

## DESCRIPTION OF CABLES.

Main cable carrying 50 Amperes, comprised of 19 wires, each 16 L.S.G. diameter, 0.6034 square inches total sectional area  
 Branch cables carrying 5 Amperes, comprised of 7 wires, each 20 L.S.G. diameter, 0.0405 square inches total sectional area  
 Branch cables carrying 5 Amperes, comprised of 7 wires, each 20 L.S.G. diameter, 0.0405 square inches total sectional area  
 Leads to lamps carrying 4 Amperes, comprised of 7 wires, each 2 1/2 L.S.G. diameter, 0.04996 square inches total sectional area  
 Cargo light cables carrying 1 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, 0.01810 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

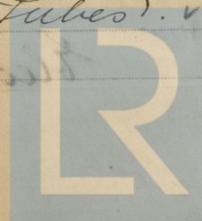
All wires & cables are V I R Taped and Braided and throughout the vessel are new in Tubing.

Joints in cables, how made, insulated, and protected none whatever

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

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 as above (Tubes)



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**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 Tubes

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

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

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

How are cables carried through beams Tubing through bulkheads, &c. Tubing

How are cables carried through decks Tube

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

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 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 usual flexible How sized as cargo connecting boxes

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 switchboard

**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.

Telford & Co. Snackay Ltd. Electrical Engineers Date 1.8.11

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 60 ft No compasses

Distance between dynamo or electric motors and steering compass 50 ft

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
A cable carrying	Amperes	feet from standard compass	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 nil course in the case of the standard compass and nil degrees on nil course in the case of the steering compass.

W. M. Bell Builder's Signature. Date \_\_\_\_\_

**GENERAL REMARKS.**

This installation has been fitted on board under special survey & tested under full working conditions & found satisfactory

It is submitted that this vessel is eligible for THE RECORD Elec. Light J.W.D. 14/9/11 H. H. M. Nucleus

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

Committee's Minute GLASGOW 12 SEP. 1911  
elec. light H. H. M.



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN

L.A.M.  
9-9-11