

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 8171

Port of Belfast Date of First Survey 6<sup>th</sup> August 1918 Date of Last Survey 22<sup>nd</sup> October 1918 No. of Visits 4  
 No. in on the Iron or Steel S.S. "Assiout" Port belonging to Liverpool  
 Reg. Book Built at Londonderry By whom North of Ireland S/bldg Co. When built 1918  
 Owners Moss Steamship Co. Ltd., Owners' Address Liverpool  
 Yard No. 70 Electric Light Installation fitted by Sunderland Forge & Eng. Co. Ltd. When fitted 1918

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

One Combined Generating Plant, consisting of Enclosed Type Single Cylinder Steam Engine direct coupled to Compound Multipolar Dynamo on Combined Bedplate.

Capacity of Dynamo 125 Amperes at 110 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 In Engine Room having switches to groups Seven of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each

One Board in Wheel House for Navigation Lights 9 switches.

" " " Engine Room 10 "

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 193 arranged in the following groups:—

A	24	lights each of	16	candle power requiring a total current of	14.4	Amperes
B	52	lights each of	16	candle power requiring a total current of	31.2	Amperes
C	19	lights each of	16	candle power requiring a total current of	11.4	Amperes
D	37	lights each of	16	candle power requiring a total current of	22.2	Amperes
E	Wireless				30.0	Amperes
E.F.	33	lights each of	16	candle power requiring a total current of	19.8	Amperes
G.	28	lights each of	16	candle power requiring a total current of	16.8	Amperes
	two	Mast head light with one lamps each of	32	candle power requiring a total current of	2.4	Amperes
	two	Side light with one lamps each of	32	candle power requiring a total current of	2.4	Amperes
	25	Cargo lights of	32	candle power, whether incandescent or arc lights	Incandescent	

If arc lights, what protection is provided against fire, sparks, &c. No Arc Lamps fitted

Where are the switches controlling the masthead and side lights placed On Bridge.

## DESCRIPTION OF CABLES.

Main cable carrying	125	Amperes, comprised of	37	wires, each	15	S.W.G. diameter	0.150	square inches total sectional area
Branch cables carrying	22.2	Amperes, comprised of	7	wires, each	18	S.W.G. diameter	0.01246	square inches total sectional area
Branch cables carrying	11.4	Amperes, comprised of	7	wires, each	23	S.W.G. diameter	0.003114	square inches total sectional area
Leads to lamps carrying	2.4	Amperes, comprised of	7	wires, each	25	S.W.G. diameter	0.0021	square inches total sectional area
Cargo light cables carrying	6	Amperes, comprised of	114	wires, each	38	S.W.G. diameter	0.00319	square inches total sectional area

**DESCRIPTION OF INSULATION, PROTECTION, ETC.** Tinned Copper Conductors insulated with pure & vulc. india rubber, taped and the whole vulcanized together and finished as follows:—

Mains: in pipe, braided and compounded overall. In accommodation: lead covd. and braided overall

In Engine Room: lead covered, armoured and braided.

Joints in cables, how made, insulated, and protected No. Joints.

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances ----- 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 -----

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 & braided cables in accommodation secured with brass saddles. Mains on upper deck run in screwed galvanized watertight tubing.



**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 Covd. & Braided  
or run in screwed galvanized watertight iron pipe.

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

What special protection has been provided for the cables near boiler casings Lead covered armoured and braided

What special protection has been provided for the cables in engine room Lead covered, armoured and braided.

How are cables carried through beams through holes bushed with fibre through bulkheads, &c. through brass W.T. Glands

How are cables carried through decks through watertight Deck Tubes.

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

If so, how are they protected run in screwed galvanized watertight tubing.

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage Yes

If so, how are the lamp fittings and cable terminals specially protected Glass Well Jar and strong brass guard.

Where are the main switches and fuses for these lights fitted In Engine Room.

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 To heavy brass terminals in castiron boxes on Decks.

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 Yes

Is the installation supplied with a voltmeter Yes, and with an amperemeter Yes, fixed In Engine Room

**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 -----

Are any switches, fuses, 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 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 600 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 3rd July '19

**COMPASSES.**

Distance between dynamo or electric motor's and standard compass 98 feet

Distance between dynamo or electric motor's and steering compass 94 "

The nearest cables to the compasses are as follows:—

A cable carrying <u>14.4</u> Amperes <u>6</u> feet from standard compass	<u>6</u> feet from steering compass
A cable carrying <u>.6</u> Amperes <u>3</u> feet from standard compass	<u>3</u> feet from steering compass
A cable carrying <u>-----</u> Amperes <u>-----</u> feet from standard compass	<u>-----</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 all course in the case of the standard compass and Nil degrees on all course in the case of the steering compass.

**THE NORTH OF IRELAND SHIPBUILDING CO. LTD.**

Builder's Signature

Date 29th July 1919

**GENERAL REMARKS.**

*The installation is of good description, and has been fitted in accordance with the Rules.*

*It is submitted that this vessel is eligible for*

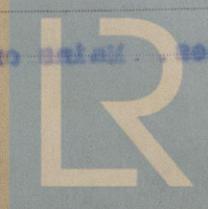
**THE RECORD, ELEC. LIGHT. H.**

*Roll. 6/8/19*

*R. J. Bewell*

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

Committee's Minute



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.