

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 29246

Port of Hull Date of First Survey 1-3-16 Date of Last Survey 4-4-16 No. of Visits 5  
 No. in 48 SUP. on the Iron or Steel "Island Queen" Port belonging to London  
 Reg. Book 48 SUP. Built at Goole By whom Goole S.E. & Repairing Co When built 1916  
 Owners LONDON & CHANNEL ISLANDS S.S. COY. Owners' Address LONDON.  
 Yard No. 175 Electric Light Installation fitted by Sunderland Forge & Eng. Co. When fitted 1916

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

one multipolar compound wound dynamo direct coupled to open type inverted  
 engine with cylinder 5" diam. by 3" stroke 450 revs. p.m. 100 steam pressure  
 both by Sunderland Forge & Eng. Co. Ltd

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

Where is Dynamo fixed bottom engineroom starboard side Whether single or double wire system is used double

Position of Main Switch Board close to dynamo having switches to groups three of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each none fitted.

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 no 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 50 @ 16 c.p. arranged in the following groups:—

A	27	lights each of	16	candle power requiring a total current of	15.12	Amperes
B	17	lights each of	16	candle power requiring a total current of	9.52	Amperes
C	6	lights each of	16	candle power requiring a total current of	3.36	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
		Mast head light with	lamps each of	candle power requiring a total current of		Amperes
		Side light with	lamps each of	candle power requiring a total current of		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 none fitted

## DESCRIPTION OF CABLES.

Main cable carrying	28.0	Amperes, comprised of	7	wires, each	17	S.W.G. diameter,	.017	square inches total sectional area
Branch cables carrying	15.12	Amperes, comprised of	7	wires, each	20	S.W.G. diameter,	.0070	square inches total sectional area
Branch cables carrying	9.52	Amperes, comprised of	7	wires, each	21½	S.W.G. diameter,	.0050	square inches total sectional area
Leads to lamps carrying	2.24	Amperes, comprised of	1	wires, each	18	S.W.G. diameter,	.00181	square inches total sectional area
Cargo light cables carrying		Amperes, comprised of		wires, each		S.W.G. diameter,		square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

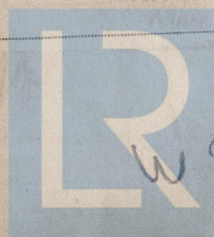
In accommodation pure rubber vulcanised rubber taped and lead covered  
 Main cables and engine room do. do. fo. armoured and braided

Joints in cables, how made, insulated, and protected There are none.

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 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 armoured and braided cables clipped to underside of  
 deck or along engine casings.



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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 lead covered or armoured and braided

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

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

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

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

How are cables carried through decks W.T. 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 armoured and braided

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 fuses for these lights fitted ✓

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 none fitted 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 ✓

Is the installation supplied with a voltmeter yes, and with an amperemeter yes, fixed on main s'bil

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 3/4/1916

COMPASSES.

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

Distance between dynamo or electric motors and steering compass about 45 feet

The nearest cables to the compasses are as follows:—

Cable carrying	Amperes	feet from standard compass	feet from steering compass
A cable carrying <u>12.32</u>	<u>about 12</u>	<u>8</u>	<u>8</u>
A cable carrying <u>.56</u>	<u>" 6</u>	<u>6</u>	<u>6</u>
A cable carrying			

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 any course in the case of the standard compass and nil degrees on any course in the case of the steering compass.

Builder's Signature. Date 5-4-1916

GENERAL REMARKS.

*This vessel has been fitted with an electric light installation as above & the workmanship is good. On completion it was tested under full working conditions & found satisfactory.*

It is submitted that

this vessel is eligible for

THE RECORD Elec. light. J.W.D.

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

Committee's Minute

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