

	<u>L I G H T S</u>	<u>A M P S.</u>	
A.	Saloon.	70	42
B	2nd. Saloon.	29	17.5
C	Forecastle.	25	15
D	Steerage.	70	43
E	1st. S.R. Outer.	36	22
F.	1st. S.R. Inner.	23	13
G	2nd. S.R. Outer.	16	9
H	2nd. S. R. Inner.	18	11
I	General.	37	25
J	General Aft.	21	12.5
K	Stores.	25	15
L	Decklights.	33	19
M	Daylights.	67	39
N	Daylights	105	63
O	Daylights.	45	27
P	Engine Room.	63	37
Q	Stokehold.	32	19
R	Cargo.	60	36
S	Arc Fwd.		25
T	Arc Midships.		25
U	Arc Aft.		25
V	Motor Fwd.		60
W	Motor Aft.		60

RECEIVED

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SUPPLIMENTARY SHEET T. S. S. "ORONSA"

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Lloyd's Register  
Foundation

W684-0020 1/2

rubber. the whole vulcanized together and finally taped & braided. In the  
the wires, after vulcanizing are lead-covered served & spirally...

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 6162

Port of Belfast Date of First Survey May 25th Date of Last Survey 8th Aug No. of Visits 13  
 No. in Reg. Book on the Steel S.S. Crowned Port belonging to Liverpool  
 Built at Belfast By whom Harling & Wolff L<sup>d</sup> When built 1906  
 Owners Pacific Steam Nav. Co Owners' Address Liverpool  
 Yard No. 374 Electric Light Installation fitted by A. H. Allen Son & Bay L<sup>d</sup> When fitted 1906

### DESCRIPTION OF DYNAMO, ENGINE, ETC.

3 Compound Engines having cylinders 10" and 17" dia. by 10" stroke direct coupled to compound four pole dynamos.

Capacity of Dynamo 400 Amperes at 100. Volts whether continuous or alternating current Continuous.

Where is Dynamo fixed in recess at after end of Engine Room. at middle platform level.

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

Positions of auxiliary switch boards and numbers of switches on each \_\_\_\_\_

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 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 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 778 arranged in the following groups:— as per supplementary sheet.

A	lights each of	candle power requiring a total current of	Amperes
	<u>See Supplementary List</u>		
B	lights each of	candle power requiring a total current of	Amperes
C	lights each of	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
<u>2</u>	<u>Mast head lights with 1 lamp each of</u>	<u>32</u>	<u>candle power requiring a total current of 2.4 Amperes</u>
<u>2</u>	<u>Side lights with 1 lamp each of</u>	<u>32</u>	<u>candle power requiring a total current of 2.4 Amperes</u>
	<u>10 Cargo lights each of 6 of 16.</u>		<u>candle power, whether incandescent or are lights incandescent.</u>

If are lights, what protection is provided against fire, sparks, &c. also 3 arc lamps totally enclosed in lanterns

Where are the switches controlling the masthead and side lights placed in wheelhouse on bridge

### DESCRIPTION OF CABLES.

Main cable carrying 400 Amperes, comprised of 61 wires, each 12 L.S.G. diameter, .532 square inches total sectional area

Branch cables carrying 42 Amperes, comprised of 19 wires, each 17 L.S.G. diameter, .0477 square inches total sectional area

Branch cables carrying 22 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .0229 square inches total sectional area

Leads to lamps carrying 3 Amperes, comprised of 1 wires, each 16 L.S.G. diameter, .0032 square inches total sectional area

Cargo light cables carrying 3.6 Amperes, comprised of 145 wires, each 38 L.S.G. diameter, .0042 square inches total sectional area

### DESCRIPTION OF INSULATION, PROTECTION, ETC.

The conductor is tinned, covered with layer of pure Para rubber, then two layers vulcanizing rubber, the whole vulcanized together and finally taped & braided. In machinery spaces the wires, after vulcanizing, are lead covered served & spirally armoured with G.I. wires.

Joints in cables, how made, insulated, and protected thoroughly soldered, insulated with two layers of pure Para rubber, two layers prepared tape and varnished.

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 no.

How are the cables led through the ship, and how protected in strong wood casing.



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

Are they in places always accessible Yes.

What special protection has been provided for the cables in open daycays or where exposed to weather or moisture on open decks they are lead covered & on masts in iron pipes.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat none near undue heat.

What special protection has been provided for the cables near boiler casings } Lead covered, served & spirally armoured  
 What special protection has been provided for the cables in engine room } with G.I. wires,  
 How are cables carried through beams in fibre faucles through <sup>U.T.</sup> bulkheads, &c. in glands with brass nuts.

How are cables carried through decks in G.I. pipes bushed with fibre.

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

If so, how are they protected strong wood casing.

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 \_\_\_\_\_

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel screwed to yoke of magnet.

How are the returns from the lamps connected to the hull soldered to 3/8" Brass screws.

Are all the joints with the hull in accessible positions Yes

**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 installation is \_\_\_\_\_ supplied with a voltmeter and 3 ampere meters fixed on switch board.

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.

For W. G. Allen Son & Co Ltd Electrical Engineers Date \_\_\_\_\_  
H. L. Foster.

**COMPASSES.**

Distance between dynamo or electric motors and standard compass Dynamo 170 feet, after motor 90 feet Ford Motor 63 feet

Distance between dynamo or electric motors and steering compass Dynamo 165 feet, after motor 85 feet Ford motor 58 feet

The nearest cables to the compasses are as follows:—

A cable carrying <u>15</u> Amperes	<u>9</u> feet from standard compass	<u>4</u> feet from steering compass
A cable carrying _____ Amperes	<u>all double wired</u> 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 every course in the case of the standard compass and nil degrees on every course in the case of the steering compass.

For Karlund & Wolff Ltd Builder's Signature. Date 30th August 1906

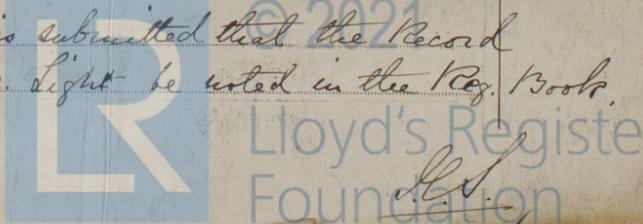
**GENERAL REMARKS.**

This installation is of good description and has been fitted in accordance with the Rules

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

Committee's Minute \_\_\_\_\_

It is submitted that the Record Elec. Light be noted in the Reg. Book.



1.9.06

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 12.