

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 5744

Port of Belfast Date of First Survey 15/12/04 Date of Last Survey 14/5/04 No. of Visits 15  
 No. in Reg. Book 15 on the London Register U.S. Kenilworth Castle belonging to London  
 Built at Belfast By whom Harland & Wolff When built 1904  
 Owners Union-Castle Mail S.S. Co. Ltd. Owners' Address London  
 Card No. 356 Electric Light Installation fitted by W.H. Allen, Lancaster, L. When fitted 1904

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Three dynamos bipolar, each direct coupled to three vertical compound engines having cylinders  $9" \times 15" \times 9"$   
 Capacity of Dynamo 300 Amperes at 100 Volts, whether continuous or alternating current continuous  
 Where is Dynamo fixed one between thrust blocks other two at of this  
 Position of Main Switch Board on stanchions between thrust blocks 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 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 where S.W.

Are the cut outs of non-oxidizable metal yes and constructed to fuse at an excess of yes 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 1246

A	Engine room	300	lights	each of	16	candle power requiring a total current of	50	Amperes
B	Forecastle	12	lights	each of	"	candle power requiring a total current of	72	Amperes
C	Saloon port	106	lights	each of	"	candle power requiring a total current of	63	Amperes
D	Saloon starboard	110	lights	each of	"	candle power requiring a total current of	66	Amperes
E	Galley cabin port	90	lights	each of	"	candle power requiring a total current of	54	Amperes
F	Galley cabin starboard	85	lights	each of	"	candle power requiring a total current of	51	Amperes
G	Day port forward	95	lights	each of	"	candle power requiring a total current of	57	Amperes
H	Day port aft	95	lights	each of	"	candle power requiring a total current of	57	Amperes
I	Day starboard	80	lights	each of	"	candle power requiring a total current of	48	Amperes
J	Day starboard	80	lights	each of	"	candle power requiring a total current of	48	Amperes
K	Navigation	91	lights	each of	"	candle power requiring a total current of	54	Amperes
L	Must head light with	25	lamps each of	25	candle power requiring a total current of	36	2	Amperes
M	Side light with	1	lamps each of	25	candle power requiring a total current of	2	2	Amperes
N	Cargo lights of	6	16 C.P.		candle power, whether incandescent or arc lights	incandescent		

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

No arcs fitted

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

## DESCRIPTION OF CABLES.

Main cable carrying	300	Amperes, comprised of	61	wires, each	14	L.S.G. diameter, .515 square inches total sectional area
Branch cables carrying	62	Amperes, comprised of	19	wires, each	16	L.S.G. diameter, .062 square inches total sectional area
Branch cables carrying	23	Amperes, comprised of	7	wires, each	16	L.S.G. diameter, .021 square inches total sectional area
Leads to lamps carrying	3	Amperes, comprised of	7	wires, each	22	L.S.G. diameter, .0042 square inches total sectional area
Cargo light cables carrying	36	Amperes, comprised of	145	wires, each	38	L.S.G. diameter, .0042 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cables insulated with layers of pure + vulcanising rubber protected by sewing of lamp braiding coated with preservative compound  
 Cables in machinery spaces, heavily armoured, braided, lead covered, served & cased  
 Joints in cables, how made, insulated, and protected spliced joints soldered covered with layers of pure rubber strip and ozokerite tape, finally 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 pine casing covered with heavy capping screwed on with brass screws





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 *none exposed*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *lead covered served + arm'd cable*

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

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

How are cables carried through beams *through holes lashed with fibre* through bulkheads, &c. *also + brass glands where necessary*

How are cables carried through decks *through galv'd iron deck tubes lashed each end with fibre*

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 *strong wood casing + capping*

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

If so, how are the lamp fittings and cable terminals specially protected *strong brass guards*

Where are the main switches and cut outs for these lights fitted *on switchboard*

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 *portable* How fixed */*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *by brass socket in limit of magnet*

How are the returns from the lamps connected to the hull *by large brass terminal + 1/4 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 *three* voltmeters and *three* amperemeters fixed *on main 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. A. Allen Son + Co Ltd.*

*C. P. Hunter*

Electrical Engineers

Date *20.5.04*

COMPASSES.

Distance between dynamo or electric motors and standard compass *about 236 feet*

Distance between dynamo or electric motors and steering compass *about 236 feet*

The nearest cables to the compasses are as follows:—

A cable carrying *about 9* Amperes *about 14* feet from standard compass *about 14* feet from steering compass

A cable carrying *-* Amperes *-* feet from standard compass *-* feet from steering compass

*There is a large number of lights double wired on account of emergency*

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 *Harcourt & Wolff, Ltd.*

Builder's Signature.

Date *26th May, 1904*

GENERAL REMARKS.

*This installation is of good description throughout 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

*This installation appears to be fitted in accordance with the Rules*

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 11.



Lloyd's Register Foundation