

REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 5267
5266

Port of Belfast Date of First Survey 11 March 1900 Date of Last Survey 11 April 1901 Visits 6
 No. in on the Iron of Steel 290 Carrigan Head Port belonging to Belfast
 Reg. Book Built at Belfast By whom Workman-Clark & Co. When built 1907
 Owners Ulster S. S. Co. Ltd. Owners Address Belfast
 Yard No. 146 Electric Light Installation fitted by Messrs. J. A. Holmes & Co. When fitted 1907

DESCRIPTION OF DYNAMO, ENGINE, ETC.

90 lbs 6 1/2" x 6" open auto Ransome engine coupled direct to Castile compound dynamo.

Capacity of Dynamo 110 Amperes at 65 Volts, whether continuous or alternating current direct

Where is Dynamo fixed standing platform in engine room

Position of Main Switch Board near dynamo having switches to groups A B C D E of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each board on middle platform 6 sws & DP fuses
1 Bd in Mess room 5 DP fuses 1 Bd in Pantry 4 DP fuses 1 Bd in W. house
4 DP sws fuses 1 Bd in the castle 52 DP fuses

If cut outs are fitted on main switch board to the cables of main circuit yes and on each auxiliary switch boards 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

Are the cut outs of non-oxidizable metal tin and constructed to fuse at an excess of 50 per cent over the normal current

Are all cut outs fitted in easily accessible positions on fuse box 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 tables fixed

Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases slate or porcelain

Total number of lights provided for 110 - 16 c.p. arranged in the following groups 5 - 5

A	34 lights each of	33-16 c.p.	4-32	candle power requiring a total current of	36.9	Amperes
B	26 lights each of	16		candle power requiring a total current of	23.4	Amperes
C	14 lights each of	16		candle power requiring a total current of	12.6	Amperes
D	2 lights each of	10A wres		candle power requiring a total current of	20	Amperes
E	lights each of			candle power requiring a total current of		Amperes
	2 Mast head lights with	1 lamp each of	32	candle power requiring a total current of	3.6	Amperes
	2 Side lights with	1 lamp each of	32	candle power requiring a total current of	3.6	Amperes

4 Cargo lights of 6 x 16 candle power, whether incandescent or arc lights incand.
2 are lamps
 If arc lights, what protection is provided against fire, sparks, &c. in 15' lanterns

Where are the switches controlling the masthead and side lights placed in 15' house

DESCRIPTION OF CABLES.

Main cable carrying	110	Amperes, comprised of	19	wires, each	13	L.S.G. diameter, .128	square inches total sectional area
Branch cables carrying	34	Amperes, comprised of	7	wires, each	14	L.S.G. diameter, .035	square inches total sectional area
Branch cables carrying	12	Amperes, comprised of	7	wires, each	18	L.S.G. diameter, .0128	square inches total sectional area
Leads to lamps carrying	4	Amperes, comprised of	7	wires, each	21	L.S.G. diameter, .005	square inches total sectional area
Cargo light cables carrying	12	Amperes, comprised of	7	wires, each	17	L.S.G. diameter, .014	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Kenley's Class G
 Joints in cables, how made, insulated, and protected soldered joints lapped with okonite tape & protected with a lapping of manson tape

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 no

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 main running fore aft on stbd side in galv. iron pipe in engine room stokehold iron sheathed

DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *Run along starboard alleyway & Bulwarks.*

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *iron pipe*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *I sheathed wire*

What special protection has been provided for the cables near boiler casings *9 S. wire*

What special protection has been provided for the cables in engine room *9 S wire*

How are cables carried through beams *in insulating bushes.* through bulkheads, &c. *Brass stuffing boxes*

How are cables carried through decks *lead or iron deck tubes*

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 *Iron pipe*

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 *✓*

How are the returns from the lamps connected to the hull *✓*

Are all the joints with the hull in accessible positions *✓*

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 *not* supplied with a voltmeter and *an amperemeter, fixed on main switch*

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 *600* 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.

Allen Crowe
FOR J. H. HOLMES & CO.,
SECRETARY.

Electrical Engineers

Date *20-4-1901*
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COMPASSES.

Distance between dynamo or electric motors and standard compass *100 ft*

Distance between dynamo or electric motors and steering compass *140 ft*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>9</i>	<i>15</i>	<i>5</i>	<i>5</i>
<i>8</i>	<i>20</i>	<i>8</i>	<i>8</i>

Have the compasses been adjusted with and without the electric installation at work at full power *✓*

The maximum deviation due to electric currents, etc., was found to be *1/2* degrees on *no* course in the case of the standard compass and *no* course in the case of the steering compass.

PRO WORKMAN, CLARK & CO., LIMITED

Builder's Signature

Date *24th April 1901*

GENERAL REMARKS.

This installation appears to be of good description and has been fitted in accordance with the Rules.

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

Committee's Minute

It is submitted that this installation appears to be in accordance with the Rule requirements.

As above

Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.