

REC-16 MAR 1907 No.

FRI. 22 MAR 1907

Received at London Office 18

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 6278

Port of Belfast Date of First Survey Nov. 28th Date of Last Survey Jan 8th No. of Visits 7
 No. in 15 on the Iron or Steel St. Lewis Leone Port belonging to London
 Reg. Book Belfast Built at Belfast By whom Harland & Wolff L^{rs} When built 1907
 Owners Butch & Arcein S. A. Coy^{rs} Address Liverpool
 Yard No. 384 Electric Light Installation fitted by W. H. Allen Lambey L^{rs} When fitted 1907

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One engine having cylinder 8" diameter by 7" stroke coupled direct to one four pole compound wound dynamo.

Capacity of Dynamo 120 Amperes at 100 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed on starting platform starboard side

Position of Main Switch Board starboard side starting platform (near dynamo) having switches to groups A.B.C.D.E.F.G.H. 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

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 180 arranged in the following groups:—

A Signals Saloon	43 lights each of	16	candle power requiring a total current of	25.8	Amperes
B Forecastle	20 lights each of	16	candle power requiring a total current of	12.0	Amperes
C Deck	20 " " "	16	" " " " " " " "	12.0	"
D Poop	19 lights each of	16	candle power requiring a total current of	11.4	Amperes
E Machinery Spaces	42 " " "	16	" " " " " " " "	25.2	"
F Cargo lights as under	lights each of	8 of 16	candle power requiring a total current of	19.2	Amperes
G Deck light	" " "	"	" " " " " " " "	25.0	"
H Deck light	lights each of	"	candle power requiring a total current of	25.0	Amperes
2 Mast head lights with	1 lamp each of	32	candle power requiring a total current of	1.2	Amperes
2 Side lights with	1 lamp each of	32	candle power requiring a total current of	1.2	Amperes

H Cargo lights of each of 8 of 16 candle power, whether incandescent or arc lights incandescent

If arc lights, what protection is provided against fire, sparks, &c. 2 arc lamps totally enclosed in iron framed lanterns with glass sides protected with suitable wire guards.

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

DESCRIPTION OF CABLES.

Main cable carrying 120 Amperes, comprised of 37 wires, each 16 L.S.G. diameter, .1176 square inches total sectional area

Branch cables carrying 25 Amperes, comprised of 7 wires, each 15 L.S.G. diameter, .02822 square inches total sectional area

Branch cables carrying 19.2 Amperes, comprised of 7 wires, each 18 L.S.G. diameter, .02227 square inches total sectional area

Leads to lamps carrying 3 Amperes, comprised of 1 wire each 16 L.S.G. diameter, .005217 square inches total sectional area

Cargo light cables carrying 4.8 Amperes, comprised of 145 wires, each 38 L.S.G. diameter, .0072 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

The conductor is tinned, covered with one layer pure Para rubber, then two layers vulcanizing rubber, the whole vulcanized together finally taped stranded in machinery spaces the wires after vulcanizing are lead covered and specially armored with 6.9 wires

Joints in cables, how made, insulated, and protected thoroughly soldered insulated with two layers pure Para rubber two layers prepared tape then 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 except in hold where

They are enclosed in galvanized iron piping



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 & externally braided, in iron pipes where necessary*

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 separately*

What special protection has been provided for the cables in engine room } *armoured with G.I. wires*

How are cables carried through beams *in fine furlers* through bulkheads, &c. *in fine furlers*

How are cables carried through decks *in G.I. pipes lashed with wire*

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 *in G.I. 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 *screwed to yoke of magnet*

How are the returns from the lamps connected to the hull *soldered to 3/8" Brass Bolt 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 *-* an amperemeter, fixed on *switchboard*

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. H. ALLEN, SON & CO. LTD**

W. H. Allen

Electrical Engineers

Date *12.3.07*

COMPASSES.

Distance between dynamo or electric motors and standard compass *82 feet*

Distance between dynamo or electric motors and steering compass *89 feet*

The nearest cables to the compasses are as follows:—

A cable carrying <i>10.8</i> Amperes	<i>10</i> feet from standard compass	<i>6</i> feet from steering compass
A cable carrying <i>10.8</i> Amperes	<i>10</i> feet from standard compass	<i>6</i> feet from steering compass
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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 Harland & Wolff Ltd

Builder's Signature.

Date *18th March 1907*

GENERAL REMARKS.

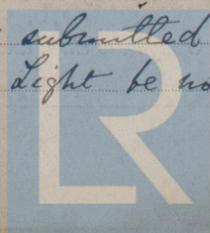
This installation has been fitted in accordance with the Rules, and appears to be of good description throughout

R. J. P. Devenish

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. Books.



Lloyd's Register
Foundation

22.3.07

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM No. 12.