

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1116

Port of *Greenock* Date of First Survey *14th Nov. 1896* Date of Last Survey *14th Feb. 1897* No. of Visits *15*
No. in Reg. Book *39* on the *Iron* Steel *Iron* *James S. Bhadra* Port belonging to *London*
Built at *Port Glasgow* By whom *Russell & Co.* When built *1894*
Owners *Duncan Macneill & Co.* Owners Address *Old Broad St. London, E.C.*
Yard No. *403* Electric Light Installation fitted by *Clark & Chapman & Co. (Lim)* When fitted *1894*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

High Speed Double acting Engine, coupled direct to a compound wound continuous current dynamo.
Capacity of Dynamo *78* Amperes at *70* Volts, whether continuous or alternating current *continuous*
Where is Dynamo fixed *Engine Room Starboard Side.*
Position of Main Switch Board *4 ft. from Dynamo* having switches to groups *A.B.C.D.E.F.G.* of lights, &c., as below:
Positions of auxiliary switch boards and numbers of switches on each *each light is controlled by a separate switch, switches controlling deck lights (where exposed) are fixed in locked box top of Engine Room.*
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 *yes* and constructed to fuse at an excess of *50* 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 *58* arranged in the following groups:—
A *5* lights each of *16* candle power requiring a total current of *5* Amperes
B *8* lights each of *16* candle power requiring a total current of *7.5* Amperes
C *8* lights each of *16* candle power requiring a total current of *7.5* Amperes
D *11* lights each of *16* candle power requiring a total current of *10.5* Amperes
E.F.G. *26* lights each of *16* candle power requiring a total current of *24* 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
2 Cargo lights of *16* candle power, whether incandescent or arc lights *Incandescent*
If arc lights, what protection is provided against fire, sparks, &c. —
Where are the switches controlling the masthead and side lights placed —

DESCRIPTION OF CABLES.

Main cable carrying *78* Amperes, comprised of *19* wires, each *14* L.S.G. diameter, *.097* square inches total sectional area
Branch cables carrying *10* Amperes, comprised of *7* wires, each *18* L.S.G. diameter, *.012* square inches total sectional area
Branch cables carrying — Amperes, comprised of — wires, each — L.S.G. diameter, — square inches total sectional area
Leads to lamps carrying *1* Amperes, comprised of *1* wires, each *18* L.S.G. diameter, *.0018* square inches total sectional area
Cargo light cables carrying *5* Amperes, comprised of *1* wires, each *14* L.S.G. diameter, *.005* square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Vulcanized Rubber Taped and braided too negethin quality Lead covered.
Joints in cables, how made, insulated, and protected *No joints except mechanical ones.*
Are all the joints of cables thoroughly soldered, resin only having been used as a flux — 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 *In specially strong wood casing fixed close up to deck.*

GRK 336-0217

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 and placed in strong ^{teak} wood casing

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

Teak casing

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

Lead covered and teak wood casing.

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

" " " " " "

How are cables carried through beams

In teak insulators

through bulkheads, &c.

none through bulkheads

How are cables carried through decks

In wrought iron pipes.

Are any cables run through coal bunkers

no.

or cargo spaces

no.

or spaces which may be used for carrying cargo, stores, or baggage

no.

If so, how are they protected

—

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 cast iron water-tight boxes.

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

supplied with a voltmeter and

an amperemeter, fixed

at main switch board,

The copper used is guaranteed to have a conductivity of

98

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.

For Blake, Chapman & Co. Ltd.

on

W. Chapman

Chairman

Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass

72 feet

Distance between dynamo or electric motors and steering compass

68

The nearest cables to the compasses are as follows:—

2 A cables carrying	<i>25</i>	Amperes	<i>22</i>	feet from standard compass	<i>—</i>	feet from steering compass
2 A cables carrying	<i>17</i>	Amperes	<i>—</i>	feet from standard compass	<i>24</i>	feet from steering compass
A cable carrying	<i>—</i>	Amperes	<i>—</i>	feet from standard compass	<i>—</i>	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

course in the case of the

standard compass and

degrees on

course in the case of the steering compass.

(As the installation was made through the agents Messrs. Messon Williams & Co. Ltd. the builders' liability is signed by this agent.)

Builder's Signature

Date

GENERAL REMARKS.

The above installation has been fitted to our satisfaction.

J. J. House. A.B. Heron.

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

Committee's Minute

This installation appears to be fitted in accordance with the Rules

J.M.

8/2/97

Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN