

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 63256

Port of *Newcastle-on-Tyne* Date of First Survey *28 Oct* Date of Last Survey *5th Nov 1912* No. of Visits
 No. in Reg. Book on the *Iron* Steel *S.S. "FULCENS"* Port belonging to *London*
 Built at *Newcastle-on-Tyne* By whom *Wood, Skinner & Co.* When built *1912*
 Owners *Stephenson Clarke & Co.* Owners Address *London*
 Yard No. *149* Electric Light Installation fitted by *Marshall Electrical Engineering & Stationery Co. Ltd. North Shields* When fitted *1912*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

"Castle" dynamo by J. & S. Holmes & Co. Engine "Radey & Co."
 Capacity of Dynamo *90* Amperes at *100* Volts, whether continuous or alternating current *continuous*
 Where is Dynamo fixed *Cover part Eng. Room* Whether single or double wire system is used *double*
 Position of Main Switch Board *alongside dynamo* having switches to groups *4 main switches* of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each *an average of two lights to each switch. Each branch board fixed as near as possible to respective lights*
 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 *25.5* 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. porcelain & slate*
 Total number of lights provided for *102* arranged in the following groups:—
 A *24* lights each of *16* candle power requiring a total current of *16.24* Amperes
 B *48* lights each of *16* candle power requiring a total current of *26.88* Amperes
 C *14* lights each of *16* candle power requiring a total current of *12.32* Amperes
 D *8* lights each of *16* candle power requiring a total current of *4.48* Amperes
 E lights each of candle power requiring a total current of Amperes
 Mast head light with *2 (one in each) 22* lamps each of candle power requiring a total current of *2.24* Amperes
 Side light with *2 (one in each) 22* lamps each of candle power requiring a total current of *2.24* Amperes
 Cargo lights of *16 cp. 16 lamp* candle power, whether incandescent or arc lights *incandescent*
 If arc lights, what protection is provided against fire, sparks, &c. *No arcs*

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

DESCRIPTION OF CABLES.

Main cable carrying *59.92* Amperes, comprised of *19* wires, each *14* L.S.G. diameter, *0.0944* square inches total sectional area
 Branch cables carrying *16.24* Amperes, comprised of *4* wires, each *14* L.S.G. diameter, *0.1106* square inches total sectional area
 Branch cables carrying *26.88* Amperes, comprised of *4* wires, each *14* L.S.G. diameter, *0.1254* square inches total sectional area
 Leads to lamps carrying *4.48* Amperes, comprised of *1* wires, each *14* L.S.G. diameter, *0.04896* square inches total sectional area
 Cargo light cables carrying Amperes, comprised of wires, each L.S.G. diameter, square inches total sectional area
 NOTE: Included in above

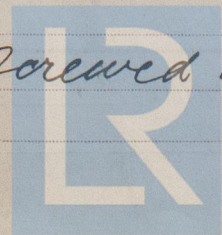
DESCRIPTION OF INSULATION, PROTECTION, ETC.

(a) *Pure & vulcanised India Rubber insulated & taped & braided;*
 (b) *Lead covered. Lead covered & armoured with galvanized iron wires*
 Insulation:—Glass (a) in Rd. Gal. Keel tubes. Accorn:—*"B" Class.*
 Engine Room *"C" Class.*
 Joints in cables, how made, insulated, and protected *No joints*

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 Rd. Galva Screwed Steel tubes*



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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 cover & Armad. Red Gal steel tubes

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

do.

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

do.

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

do.

How are cables carried through beams

Insulating ferrules

through bulkheads, &c.

brass watertight gland stuffing box

How are cables carried through decks

Gal. steel tubes (Red)

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

No.

Cargo light cables, whether portable or permanently fixed

permanently

How fixed

In Red Gal Steel tubes

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

The installation is

now

supplied with a voltmeter and

with

an amperemeter, fixed

on main Switchboard.

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 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 1000 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 THE NORTHERN ELECTRICAL ENGINEERING

AND PLATING CO. LTD.

Electrical Engineers

Date

July 31st 1913

COMPASSES.

Distance between dynamo or electric motors and standard compass

149 feet.

Distance between dynamo or electric motors and steering compass

144 feet.

The nearest cables to the compasses are as follows:—

A cable carrying

Amperes

150 lbs for compass light

feet from standard compass

feet from steering compass

A cable carrying

Amperes

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

course in the case of the

standard compass and

Nil

degrees on

Nil

course in the case of the steering compass.

WOOD, SKINNER & CO., LIMITED.

Builder's Signature.

Date

31st July 1913.

GENERAL REMARKS.

This Installation has been efficiently fitted on board & tried under steam and the vessel is eligible in my opinion to have the record of Electric Light made in the Register Book

It is submitted that this vessel is eligible for THE RECORD. Elec. light.

11/5/13

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

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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