

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 70374

Port of NEWCASTLE-ON-TYNE Date of First Survey 3rd Aug Date of Last Survey 10th Oct 17 No. of Visits 12
 No. in Reg. Book 367 on the Iron or Steel San. Gennaro Port belonging to Raffles
 Built at Newcastle By whom Palmer & Co When built 1917-7
 Owners De. de Har - Top. de Har - Top. de Har Owners' Address Palmer's Electrical Dept.
 Yard No. 843 Electric Light Installation fitted by Palmer's Electrical Dept. When fitted 13-10-17

DESCRIPTION OF DYNAMO, ENGINE, ETC.

There are 3 (Three) Engines & Dynamos Engines by E Hindley & Sons Burton Dorset and Dynamos by Bruce Peebles & Co Edinburgh.

Capacity of Dynamo 510 Amperes at 100 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed In Engine Room Whether single or double wire system is used Double

Position of Main Switch Board Beside Dynamos having switches to groups 11 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each

None

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 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 298 arranged in the following groups:—

Navigation & Bridge Accom lights each of 16 lamps of 32 c.p. candle power requiring a total current of 30.5 Amperes

Engines Accom & W.T. lights each of 77 lamps of 16 c.p. candle power requiring a total current of 44 Amperes

C Forward Accom. lights each of 44 lamps 16 c.p. candle power requiring a total current of 25 Amperes

D Ap. Accom lights each of 17 lamps 16 c.p. candle power requiring a total current of 7.5 Amperes

E Engine & Boiler Rooms lights each of 113 lamps 16 c.p. candle power requiring a total current of 63 Amperes

2 Mast head light with 1 lamps each of 32 candle power requiring a total current of 1 Amperes

2 Side light with 1 lamps each of 32 candle power requiring a total current of 1 Amperes

12 Cargo lights of 160 candle power, each 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

In New Chart House

DESCRIPTION OF CABLES.

Main cable carrying 510 Amperes, comprised of 91 wires, each .098 L.S.G. diameter, .7 square inches total sectional area

Branch cables carrying 50 Amperes, comprised of 19 wires, each .14 L.S.G. diameter, .094 square inches total sectional area

Branch cables carrying 25 Amperes, comprised of 7 wires, each .16 L.S.G. diameter, .022 square inches total sectional area

Leads to lamps carrying 3 Amperes, comprised of 1 wires, each .17 L.S.G. diameter, .0025 square inches total sectional area

Cargo light cables carrying 1.6 Amperes, comprised of 7 wires, each .18 L.S.G. diameter, .0125 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

All Cables in Engine & Boiler and cargo spaces Lead covered, Armoured & braided.

All cables in Accommodation V.I.R. run in wood casing

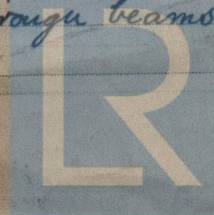
All cables protected where liable to damage.

Joints in cables, how made, insulated, and protected 1 cable size 3/8 Armoured was drilled into. A Brass joint box was inserted to make a good mechanical joint. This box was provided with W.T. lid & glands. Position of box - on Upper deck forward.

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 Armoured cables lead through beams. V.I.R. cables in Wood Casing.



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

positions are all lead covered.

Cables in exposed

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

None

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

None

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

Armoured wire used. Tubing under cylinders

How are cables carried through beams

Through well-drifted holes

through bulkheads, &c. In W. T. glands.

How are cables carried through decks

in W. T. Deck tubes.

Are any cables run through coal bunkers

or cargo spaces

Yes

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

Yes

If so, how are they protected

Armoured & lead covered & braided.

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

The installation is

Yes

supplied with a voltmeter and

Yes

an amperemeter, fixed

on 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

95%

per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than statute mile after 24 hours' immersion in seawater.

2500

megohms per

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.

Palmer's Shipbuilding & Iron Co., Ltd.

Electrical Engineers

Date Nov. 13th 1917.

COMPASSES.

Distance between dynamo or electric motors and standard compass

350ft

Distance between dynamo or electric motors and steering compass

350ft

The nearest cables to the compasses are as follows:—

A cable carrying 1.5 Amperes

on

feet from standard compass

10ft

feet from steering compass

A cable carrying 1.5 Amperes

10ft

feet from standard compass

on

feet from steering compass

A cable carrying 350 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

The maximum deviation due to electric currents, etc., was found to be

12

degrees on

course in the case of the

standard compass and

degrees on

course in the case of the steering compass.

Builder's Signature.

Date

13th Nov 1917

GENERAL REMARKS.

This electric lighting installation has been fitted in accordance with the rules and satisfactorily tested with all lights on.

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

KWD

20/11/17

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

Committee's Minute



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