

REPORT ON ELECTRIC LIGHTING INSTALLATION.

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No. 31421

Port of GlasgowDate of First Survey 23.3.12Date of Last Survey 7.5.12No. of Visits 15No. in
Book 131Built at WhitburnPort belonging to LibanOwners Russian East Asiatic S. Co. Ltd.By whom Barclay Curle & CoWhen built 1912Yard No. 494Electric Light Installation fitted by A. Watson & Co., Ltd.When fitted 1912

DESCRIPTION OF DYNAMO, ENGINE, ETC.

2 Compound wound continuous current dynamo
Coupled direct to 2 Compound Engines 9' x 14 1/2" x 16 on 100 lb. pressure
 Capacity of Dynamo 350 Amperes at 110 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed bottom platform of Engine Room
 Position of Main Switch Board Next Port Dynamo having switches to groups 11 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Main Deck, port side 4. Emigrants
dining Saloon 4. Main Deck Starboard 5. Forecastle 3
Emigrants Accommodation 6, First Class pantry 4 & 2nd Class 3.

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 580 arranged in the following groups:—

| | | | | | | |
|---|------------------------------------|-----------------|----|--|--------------|---------|
| A | 130 | lights each of | 16 | candle power requiring a total current of | 75 | Amperes |
| B | 95 | lights each of | 16 | candle power requiring a total current of | 53 | Amperes |
| C | 97 | lights each of | 16 | candle power requiring a total current of | 54 | Amperes |
| D | 70 | lights each of | 16 | candle power requiring a total current of | 40 | Amperes |
| E | 13 | lights each of | 16 | candle power requiring a total current of | 9.3 | Amperes |
| 2 | Mast head light with | 2 lamps each of | 32 | candle power requiring a total current of | 2 | Amperes |
| 2 | Side light with | 2 lamps each of | 32 | candle power requiring a total current of | 2 | Amperes |
| 8 | Cargo lights of 5-16 CP. lamp = 80 | | | candle power, whether incandescent or arc lights | Incandescent | |

If arc lights, what protection is provided against fire, sparks, &c. Incandescent

Where are the switches controlling the masthead and side lights placed Whulhouse

DESCRIPTION OF CABLES.

| | | | | | | |
|-----------------------------|-----|-----------------------|-----|-------------|----|---|
| Main cable carrying | 350 | Amperes, comprised of | 61 | wires, each | 12 | L.S.G. diameter, .5178 square inches total sectional area |
| Branch cables carrying | 60 | Amperes, comprised of | 19 | wires, each | 16 | L.S.G. diameter, .0612 square inches total sectional area |
| Branch cables carrying | 28 | Amperes, comprised of | 7 | wires, each | 15 | L.S.G. diameter, .0285 square inches total sectional area |
| Leads to lamps carrying | 2.5 | Amperes, comprised of | 17 | wires, each | 17 | L.S.G. diameter, .002 square inches total sectional area |
| Cargo light cables carrying | 3 | Amperes, comprised of | 108 | wires, each | 38 | L.S.G. diameter, .0031 square inches total sectional area |

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Covered & Armoured w/ Gal. Iron wire
Lead Covered in Cabins. Lead
is elsewhere.

Joints in cables, how made, insulated, and protected

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 Clipped to decks etc., w/ brass clips
accommodation where lead covered wire is used & w/ Gal. Iron
clips where exposed & lead covered & Armoured wire is used.

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 + Arm'd w/ Gal Iron wires*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Arm'd + L.C.*

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

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

How are cables carried through beams *Fibre ferrules* through bulkheads, &c. *WT glands*

How are cables carried through decks *w/ Gal Iron Deck Tubes 13" above deck*

Are any cables run through coal bunkers or cargo spaces or spaces which may be used for carrying cargo, stores, or baggage *Yes*

If so, how are they protected *Lead Covered + Arm'd*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *Yes*

If so, how are the lamp fittings and cable terminals specially protected *Well glass + Brass guard*

Where are the main switches and cut outs for these lights fitted *In Engine Room*

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 *—* 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 *also* supplied with a voltmeter and *2* an amperemeter, fixed *on Sw. Box*

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 *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.

FOR ARCHD. WATSON & CO., LTD.,

J. Dundas

Electrical Engineers

Date *21/6/12*

COMPASSES.

Distance between dynamo or electric motors and standard compass *160°-0"*

Distance between dynamo or electric motors and steering compass *150°-0"*

The nearest cables to the compasses are as follows:—

| A cable carrying | Amperes | feet from standard compass | feet from steering compass |
|------------------|----------|----------------------------|----------------------------|
| <i>2</i> | <i>4</i> | <i>5</i> | <i>5</i> |
| <i>—</i> | <i>—</i> | <i>—</i> | <i>—</i> |
| <i>—</i> | <i>—</i> | <i>—</i> | <i>—</i> |

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 *—* course in the case of the steering compass.

H. S. Currey Secretary.

Builder's Signature.

Date *25th June 1912*

GENERAL REMARKS.

This installation has been fitted in accordance with the rules, tested under full working conditions and found satisfactory.

It is submitted that this vessel is eligible for THE RECORD, Elec Light 5th 3.7.12

A. B. Forster

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

Committee's Minute

GLASGOW 2-JUL. 1912

Elec. Light



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