

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 28122

Port of Hull Date of First Survey 14. 11. 14 Date of Last Survey 21-11-14 No. of Visits 4  
 No. in Reg. Book 403 on the Iron or Steel seaw steamer Lemberg Port belonging to Boehrer & Sons Ltd  
 Built at Leeds By whom Boehrer & Sons Ltd When built 1914-11  
 Owners Lindsay Steam Fishing Co. Ltd Owners' Address Fish Docks, Grimsby  
 Yard No. 612 Electric Light Installation fitted by A. W. Hyde When fitted 1914-11

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Enclosed vertical single cylinder double acting splash lubrication steam engine 180 lbs pressure direct coupled to compound dynamo  
 Capacity of Dynamo 44 Amperes at 65 Volts, whether continuous or alternating current continuous  
 Where is Dynamo fixed In the Engine Room Whether single or double wire system is used double wire  
 Position of Main Switch Board at of the Dynamo having switches to groups A. B. C. of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each each light and group of lights provided with switches as required

If fuses 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 fuses fitted to both flow and return wires or cables of all circuits including lamp circuits yes

Are the fuses of non-oxidizable metal yes and constructed to fuse at an excess of 25 per cent over the normal current

Are all fuses 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 fuses constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for are 53 arranged in the following groups:—

|   |  |         |
|---|--|---------|
| A Midship <u>23</u> lights each of <u>16</u>            | candle power requiring a total current of <u>15</u>                  | Amperes |
| B Eng. Rm. <u>15</u> lights each of <u>16</u>           | candle power requiring a total current of <u>5</u>                   | Amperes |
| C Forecastle <u>3</u> lights each of <u>16</u>          | candle power requiring a total current of <u>1</u>                   | Amperes |
| D lights each of  | candle power requiring a total current of                            | Amperes |
| E lights each of  | candle power requiring a total current of                            | Amperes |
| 3 Mast head light with <u>1</u> lamps each of <u>50</u> | candle power requiring a total current of <u>1</u>                   | Amperes |
| 2 Side light with <u>1</u> lamps each of <u>32</u>      | candle power requiring a total current of <u>.75</u>                 | Amperes |
| 1 Cargo lights of <u>48</u>                             | candle power, whether incandescent or arc lights <u>incandescent</u> |         |

If arc lights, what protection is provided against fire, sparks, &c. no

Where are the switches controlling the masthead and side lights placed no

## DESCRIPTION OF CABLES.

|   |
|---|
| Main cable carrying <u>44</u> Amperes, comprised of <u>4</u> wires, each <u>16</u> S.W.G. diameter, <u>.022</u> square inches total sectional area          |
| Branch cables carrying <u>15</u> Amperes, comprised of <u>3</u> wires, each <u>18</u> S.W.G. diameter, <u>.0053</u> square inches total sectional area      |
| Branch cables carrying <u>5</u> Amperes, comprised of <u>3</u> wires, each <u>18</u> S.W.G. diameter, <u>.0053</u> square inches total sectional area       |
| Leads to lamps carrying <u>1</u> Amperes, comprised of <u>3</u> wires, each <u>22</u> S.W.G. diameter, <u>.0018</u> square inches total sectional area      |
| Cargo light cables carrying <u>1</u> Amperes, comprised of <u>36</u> wires, each <u>38</u> S.W.G. diameter, <u>.0010</u> square inches total sectional area |

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

600 Megohm Grade India-rubber braided cable run in Solid drawn Steel Tubes: Asbestos tubes, wood casing.

Joints in cables, how made, insulated, and protected no joints in any cable

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances 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 Steel Tubes



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Foundation

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DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible no

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture in Steel Tubes

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

What special protection has been provided for the cables near boiler casings asbestos braiding & asbestos tubes

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

How are cables carried through beams ✓ through bulkheads, &c. in Steel Tubes W.I.

How are cables carried through decks in Deck Tubes

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

If so, how are they protected in Steel Tubes

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 fuses for these lights fitted ✓

If in the spaces, how are they specially protected ✓

Are any switches or fuses fitted in bunkers no

Cargo light cables, whether portable or permanently fixed portable How fixed in C.P. connection 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 ✓

Is the installation supplied with a voltmeter yes, and with an amperemeter yes, fixed on Main Switchboard

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and fuses fitted in positions not liable to the accumulation of petroleum vapour or gas ✓

Are any switches, fuses, 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 not less than that of the Engineering Standards Committee's standard, and the wires are protected by tinning from the sulphur compounds present in the insulating material.

Insulation of cables is guaranteed to have a resistance of not less than 600 megohms per statute mile at 60° Fahrenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than 500 volts and while the cable is still immersed.

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.

A. W. Hyde.

Electrical Engineers

Date Nov. 21<sup>st</sup> 1914.

COMPASSES.

Distance between dynamo or electric motors and standard compass 50 ft

Distance between dynamo or electric motors and steering compass 50 ft

The nearest cables to the compasses are as follows:—

| A cable carrying | Amperes | feet from standard compass | feet from steering compass |
|------------------|---------|----------------------------|----------------------------|
| 5                | 1       | 1                          |                            |
|                  |         |                            |                            |
|                  |         |                            |                            |

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 any course in the case of the standard compass and nil degrees on any course in the case of the steering compass.

J. M. Cochrane

Builder's Signature.

Date November 30<sup>th</sup> 1914.

GENERAL REMARKS.

This vessel has been fitted with an electric light installation as above, the workmanship is good on completion it was tested under full working conditions found satisfactory

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

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

Committee's Minute

FRI. DEC. 11. 1914