

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 3005

Port of *Melford* Date of First Survey *5 Feb* Date of Last Survey *5 July* No. of Visits *2*  
 No. in Reg. Book *22382* on the Iron or Steel *S.T. Lewis Roaring* Port belonging to *Cochrane & Sons Ltd*  
 Built at *Selby* By whom *Cochrane & Sons Ltd* When built *1917*  
 Owners *Cochrane & Sons Ltd* Owners' Address *1921*  
 Yard No. *1921* Electric Light Installation fitted by *1921*

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

*1 Kilo Steam Generating Set Engine Robey Single Cyl 4 Dynamo Electromotor S. Openshaw*  
*Compound wound Continuous Rating*

Capacity of Dynamo *10* Amperes at *100* Volts, whether continuous or alternating current *Continuous*  
 Where is Dynamo fixed *Engine Room* Whether single or double wire system is used *Double wire*  
 Position of Main Switch Board *Engine Room* having switches to groups *Two in no* of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each *none*

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 *50* 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 *37* arranged in the following groups:—

|        |   |  |   |         |
|--------|---|--|---|---------|
| A { 21 | lights each of (metallia) of 16                 | candle power requiring a total current of        | 4.2                                       | Amperes |
| B { 2  | lights each of (Carbon)                         | 16   | candle power requiring a total current of | 1.2     |
| C {    | lights each of                                  |  | candle power requiring a total current of | Amperes |
| D { 6  | lights each of (metallia)                       | 32   | candle power requiring a total current of | 2.4     |
| E { 2  | lights each of (Carbon)                         | 32   | candle power requiring a total current of | 2.4     |
| B { 3  | Mast head lights with One lamp each of (Carbon) | 16   | candle power requiring a total current of | 1.8     |
| 2      | Side lights with One lamp each of (Carbon)      | 16+32  | candle power requiring a total current of | 1.8     |
| 1      | Stern Cargo lights of (metallia) of 16          | candle power, whether incandescent or are lights | 2   | "       |

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

Where are the switches controlling the masthead and side lights placed *Wheel House*

## DESCRIPTION OF CABLES.

|                             |    |                       |   |             |      |                             |                                    |
|-----------------------------|----|-----------------------|---|-------------|------|-----------------------------|------------------------------------|
| Main cable carrying         | 10 | Amperes, comprised of | 3 | wires, each | 18   | S.W.G. diameter, .00632     | square inches total sectional area |
| Branch cables carrying      | 7  | Amperes, comprised of | 3 | wires, each | 18   | S.W.G. diameter, "          | square inches total sectional area |
| Branch cables carrying      | 3  | Amperes, comprised of | 3 | wires, each | 18   | S.W.G. diameter, "          | square inches total sectional area |
| Leads to lamps carrying     | ✓  | Amperes, comprised of | 1 | wire, each  | .044 | inch S.W.G. diameter, .0015 | square inches total sectional area |
| Cargo light cables carrying | ✓  | Amperes, comprised of | ✓ | wires, each | ✓    | S.W.G. diameter, ✓          | square inches total sectional area |

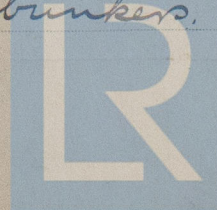
## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Joints in cables, how made, insulated, and protected *none*

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances *none* 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 *none*

Are there any joints in or branches from the cable leading from dynamo to main switch board *none*

How are the cables led through the ship, and how protected *Clipped to Bulkheads; with lead sheathing Run in conduit through bunkers.*





DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *Yes, except in bunkers when full*

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *Lead sheathing*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Run on channel plates*

What special protection has been provided for the cables near boiler casings *None near casings*

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

How are cables carried through beams *Holes lead bushed* through bulkheads, &c. *Water tight glands*

How are cables carried through decks *Water tight deck pipes*

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 *Cable run in conduit pipe thro' bunkers, otherwise lead sheathing*

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

If so, how are the lamp fittings and cable terminals specially protected *Glass shade & metal guard for lamp; no terminals exposed.*

Where are the main switches and fuses for these lights fitted *Switches in fish hold, fuses in galley.*

If in the spaces, how are they specially protected *Fitted near hatchway, close under deck.*

Are any switches or fuses fitted in bunkers *no*

Cargo light cables, whether portable or permanently fixed *none* 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 ☒

Is the installation supplied with a voltmeter *Yes*, and with an amperemeter *Yes*, fixed in *Engine Room.*

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. *Yes.*

Insulation of cables is guaranteed to have a resistance of not less than \_\_\_\_\_ 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.

Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass *48 feet*

Distance between dynamo or electric motors and steering compass *40 feet.*

The nearest cables to the compasses are as follows:—

|                  |                                     |         |                                     |                            |                                     |                            |
|------------------|-------------------------------------|---------|-------------------------------------|----------------------------|-------------------------------------|----------------------------|
| A cable carrying | <i>0.2</i>                          | Amperes | <i>10</i>                           | feet from standard compass | <i>2</i>                            | feet from steering compass |
| A cable carrying | <i>7</i>                            | Amperes | <i>16</i>                           | feet from standard compass | <i>5</i>                            | feet from steering compass |
| A cable carrying | <input checked="" type="checkbox"/> | Amperes | <input checked="" type="checkbox"/> | feet from standard compass | <input checked="" type="checkbox"/> | feet from steering compass |

Have the compasses been adjusted with and without the electric installation at work at full power *no*

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

GENERAL REMARKS.

*All wiring, switches, fuses, guards & fittings are of Admiralty Standard Pattern.*

*It is submitted that this report is correct.*

*Elec Light  
Roll*

*27/7/21*

*JW Johnstone*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

