

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 10103

Port of Middlesbrough Date of First Survey Aug Date of Last Survey While building No. of Visits 1
 No. in Reg. Book on the Iron or Steel S. S. "Maidy Dene" Port belonging to Cardiff
 Built at Stockton By whom Messrs Craig Taylor & Co Ltd When built 1918
 Owners Messrs Jenkins Richards & Evans Ltd Owners' Address Cardiff
 Yard No. 191 Electric Light Installation fitted by Messrs Salomons Bros & Co When fitted 1918

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Newcastle-on-Tyne
4 Pole
 1. 6 1/2" x 6" Open type "Rohy" engine coupled direct to a Compound Wound "Green" Dynamo. Steam pressure 100 lbs per sq. in. 360 R.P.M.
 Capacity of Dynamo 80 Amperes at 110 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 In Engine Room having switches to groups A. B. C & D of lights, &c., as below
 Positions of auxiliary ^{fuse} switch boards and numbers of ^{fuses} switches on each 1-8 way in Saloon Pantry. 1-4 way in Chart Room. 1-6 way in Engine Room. 1-4 way in Engineers Mess. 1-3 way in Forecastle.

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 121 arranged in the following groups:—

| | | | |
|------------------------------------------|-------------------------------------------------------|----------------------------------------------------------------------|---------|
| A <u>Engineers and after accom.</u> | <u>38</u> lights each of <u>16</u> | candle power requiring a total current of <u>19</u> | Amperes |
| B <u>Navigation Midships and Forward</u> | <u>54</u> lights each of <u>16</u> | candle power requiring a total current of <u>24</u> | Amperes |
| C <u>Wireless</u> | lights each of | candle power requiring a total current of <u>10.5</u> | Amperes |
| D <u>Engine Room</u> | <u>23</u> lights each of <u>16</u> | candle power requiring a total current of <u>11.5</u> | Amperes |
| E | lights each of | candle power requiring a total current of | Amperes |
| 1 | Mast head light with <u>1</u> lamps each of <u>32</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>2</u> | Amperes |
| 5 | Cargo lights of <u>5 x 16</u> | candle power, whether incandescent or arc lights <u>Incandescent</u> | |

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

Where are the switches controlling the masthead and side lights placed On Bridge In Chart house

DESCRIPTION OF CABLES.

Main cable carrying 41 Amperes, comprised of 19 wires, each 16 S.W.G. diameter, .0612 square inches total sectional area
 Branch cables carrying 24 Amperes, comprised of 4 wires, each 16 S.W.G. diameter, .0275 square inches total sectional area
 Branch cables carrying 19 Amperes, comprised of 4 wires, each 18 S.W.G. diameter, .0177 square inches total sectional area
 Leads to lamps carrying 5 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0018 square inches total sectional area
 Cargo light cables carrying 2.5 Amperes, comprised of 114 wires, each 38 S.W.G. diameter, .0032 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Lead covered and steel armoured and braided cables.

Sinned copper conductors, insulated with pure Para Rubber, vulcanised india rubber, taped and braided.

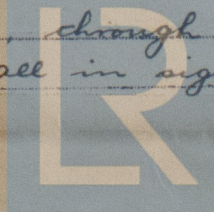
Joints in cables, how made, insulated, and protected

No joints made.

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances — 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 On underside of Decks, through Beams and on Bulkheads. all in sight.



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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 In open alleyways—Steel armoured cables. Where exposed to weather—Led through pipes.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Steel Armour + Braided.

What special protection has been provided for the cables near boiler casings Steel Armour + Braided.

What special protection has been provided for the cables in engine room Steel Armour + Braided.

How are cables carried through beams Bushed holes through bulkheads, &c. Watertight glands

How are cables carried through decks Watertight deck tubes

Are any cables run through coal bunkers No or cargo spaces Yes or spaces which may be used for carrying cargo, stores, or baggage Yes

If so, how are they protected Steel Armoured + Braided cables

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 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 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.

Falconar Cross & Co

Electrical Engineers

Date 20th April 1918.

COMPASSES.

Distance between dynamo or electric motors and standard compass 93 ft.

Distance between dynamo or electric motors and steering compass 84 ft.

The nearest cables to the compasses are as follows:—

| A cable carrying | Amperes | feet from standard compass | feet from steering compass |
|------------------|---------|----------------------------|----------------------------|
| 10 | 13 | 10 | 10 |
| 5 | 3 | 2 | 2 |
| | | | |

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 no degrees on all course in the case of the standard compass and no degrees on all course in the case of the steering compass.

For CRAIG, TAYLOR & CO. LIMITED.

A. Harplot DIRECTOR

Builder's Signature.

Date

25 April 1918

GENERAL REMARKS.

This installation has been fitted in accordance with the Rules; The materials and workmanship are good and on completion the installation was examined under full working conditions and found satisfactory.

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

JWD 7/5/18.

W. Morrison

Surveyor to Lloyd's Register of Shipping.

Committee's Minute



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