

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 10202.

Port of MIDDLESBRO Date of First Survey and Date of Last Survey White No. of Visits Building  
 No. in on the ~~Iron~~ or Steel S. S. WAR PIGEON Port belonging to London  
 Reg. Book Built at Stockton-on-Tees By whom Messrs Ropner & Son When built 1918  
 Owners The Shipping Controller Owners' Address Messrs Bell & Co. Ltd. 11, Mark Lane, London E.C. 3  
 Yard No. 525 Electric Light Installation fitted by Messrs The Sunderland Forge & Engineering Co When fitted 1918

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

One Combined Plant consisting of single cylinder vertical open type Engine 7.5" 360 revs. 100 lbs steam coupled to compound wound multipolar dynamo. Both by S.F. & E. Coy.

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

Where is Dynamo fixed Eng. Rm. Bottom Plaftm Starboard Whether single or double wire system is used double

Position of Main Switch Board close to dynamo having switches to groups five of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each on Bridge with nine switches controlling: Navigation lights, Morse light, Compasses & Telegraph.

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 100 per cent over the normal current

Are all fuses fitted in easily accessible positions Yes Are the fuses of standard dimensions No 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 158 @ 16 cp. arranged in the following groups:—

A Accommodation = 79 lights each of 16 cp. candle power requiring a total current of 44.2 Amperes

B Cargo = 30 lights each of " candle power requiring a total current of 16.8 Amperes

C Navigation = 21 lights each of " candle power requiring a total current of 11.8 Amperes

D E. & B. Rm. = 28 lights each of " candle power requiring a total current of 15.7 Amperes

E Wireless — lights each of — candle power requiring a total current of 25 Amperes

1 Mast head light with 1 lamps each of 32 candle power requiring a total current of 1.12 Amperes

2 Side light with 1 lamps each of 32 candle power requiring a total current of 2.24 Amperes

5 Cargo lights of six 16 cp. candle power, whether incandescent or arc lights incandescent

If arc lights, what protection is provided against fire, sparks, &c. none fitted

Where are the switches controlling the masthead and side lights placed on Bridge

## DESCRIPTION OF CABLES.

Main cable carrying 100 Amperes, comprised of 19 wires, each 14 S.W.G. diameter, .094 square inches total sectional area

Branch cables carrying 44.2 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, .022 square inches total sectional area

Branch cables carrying 11.8 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, .007 square inches total sectional area

Leads to lamps carrying 2.5 Amperes, comprised of 1 wires, each 18 S.W.G. diameter, .0018 square inches total sectional area

Cargo light cables carrying 3.5 Amperes, comprised of 70 wires, each 36 S.W.G. diameter, .0032 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

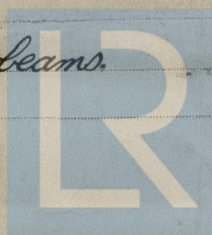
MAINS & MACHINERY SPACES. Pure & Vulk. I.R. taped & vulcanized. then Armoured & Braided  
ACCOMMODATION " ditto Lead Covered

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 — 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 A & B. cable clipped to beams.



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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 V.I.R. Cable run in pipe  
or Armoured & Braided Cable used

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

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

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

How are cables carried through beams holes bored with fibre through bulkheads, &c. W.T. Glands

How are cables carried through decks W.T. 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 Armoured & 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 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 Main Switch

**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.

FOR THE SUNDERLAND MARINE ENGINEERING CO., LTD.

Electrical Engineers

Date 20-9-18

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 100 ft.

Distance between dynamo or electric motors and steering compass 95 ft.

The nearest cables to the compasses are as follows:—

Cable	Amperes	Distance from standard compass	Distance from steering compass
A cable carrying <u>11.8</u>	<u>15</u>	<u>9</u> feet	<u>9</u> feet
A cable carrying <u>.56</u>	<u>led into</u>	<u>8</u> feet	<u>8</u> feet
A cable carrying <u>.56</u>	<u>8</u>	<u>led into</u>	<u>led into</u>

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.

**ROPNER & SONS, LIMITED,**

Builder's Signature.

Date

Sept 24/18

**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.*

*Wm Morrison*  
10-10-18 Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.