

**REPORT ON ELECTRIC LIGHTING INSTALLATION.** No. **28484**

Port of **Hull.** Date of First Survey **17.3.15** Date of Last Survey **17.4.15** No. of Visits **9**  
 No. in on the ~~Iron or Steel~~ **"Urbino"** Port belonging to **Hull.**  
 Reg. Book **7464** Built at **Hull** By whom **Charles E. & Co.** When built **1915.**  
 Owners **Mrs. Wilson Sons & Co. Ltd** Owners' Address **Hull**  
 Yard No. **609.** Electric Light Installation fitted by **Thos. Wilson Sons & Co.** When fitted **1915.**

**DESCRIPTION OF DYNAMO, ENGINE, ETC.**

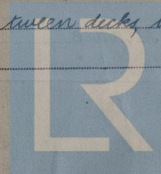
**One 12 H.P. direct coupled plant Robey's open type engine**  
**& Messrs Holmes' pole castle type compound wound Dynamo**  
 Capacity of Dynamo **120** Amperes at **100** Volts, whether continuous or alternating current **continuous**  
 Where is Dynamo fixed **In Engine Room (1st side)** Whether single or double wire system is used **double**  
 Position of Main Switch Board **on ship's 1st side** having switches to groups of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each **Bow's berth, Eng's mess room for amidships**  
**Saloon pantry and chart room for Saloon acc' and navigation**  
**Wheelhouse for aft; Bow's berth and saloon pantry for cargo**  
 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-oxidisable 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  
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases **yes**  
 Total number of lights provided for **189** arranged in the following groups:—  
 A **Cargo** **12** lights each of **96** candle power requiring a total current of **36** Amperes  
 B **Engine** **32** lights each of **16** candle power requiring a total current of **13.6** Amperes  
 C **Amidships and aft** **33** lights each of **16** candle power requiring a total current of **11.2** Amperes  
 D **Saloon, chart & Forecastle** lights each of **16** candle power requiring a total current of **19.1** **including navigation & E.L.** Amperes  
 E **Projector** lights each of candle power requiring a total current of **60** Amperes  
 2 Mast head lights with **1** lamp each of **32** candle power requiring a total current of **1 each lamp** Amperes  
 2 Side light with **1** lamp each of **32** candle power requiring a total current of " " Amperes  
 12 Cargo lights of **96 c.p. each** candle power, whether incandescent or arc lights **incandescent**  
 If arc lights, what protection is provided against fire, sparks, &c. and **2 arc lamps @ 8 amperes each, protected by globes in strong iron guards, self contained resistance enclosed in ventilated iron case.**  
 Where are the switches controlling the masthead and side lights placed **chart room**

**DESCRIPTION OF CABLES.**

Main cable carrying **120** Amperes, comprised of **19** wires, each **13** S.W.G. diameter, **.125** square inches total sectional area  
 Branch cables carrying **11.2** Amperes, comprised of **7** wires, each **18** S.W.G. diameter, **.01246** square inches total sectional area  
 Branch cables carrying **36** Amperes, comprised of **7** wires, each **16** S.W.G. diameter, **.02214** square inches total sectional area  
 Leads to lamps carrying **.5** Amperes, comprised of **1** wires, each **18** S.W.G. diameter, **.00181** square inches total sectional area  
 Cargo light cables carrying **8** Amperes, comprised of **7** wires, each **20** S.W.G. diameter, **.007005** square inches total sectional area

**DESCRIPTION OF INSULATION, PROTECTION, ETC.**

**Ventilated draw out glazed pot fuses at all distribution boxes with hinged glass fronted door having snap fasteners, all cargo connections in watertight G.I. boxes, all cargo clusters are watertight except at lampholders, and have no exposed electrical terminals all cable used is association 600 mg grade**  
 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 **no**  
 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 **Armoured and lead covered in tween decks, bunkers, engine room, tunnel, stokehold, lead covered elsewhere**



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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 heavy lead covered, without joint boxes, cables run from source of supply straight to lamp

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

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

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

How are cables carried through beams all crushed with hard wood, except armoured wire through bulkheads, &c. Tunnel bulkhead watertight gland

How are cables carried through decks watertight deck pipes (iron)

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 and lead covered, iron clipped

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 no

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 dead beat, and with an amperemeter yes dead beat, fixed main board eng. 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.

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 THOS. WILSON, SONS & CO. LTD.

Electrical Engineers

Date May 14th 1915

COMPASSES.

SUPT'G ENGINEER.

Distance between dynamo or electric motors and standard compass 130 feet

Distance between dynamo or electric motors and steering compass 125 feet

The nearest cables to the compasses are as follows:—

Cable	Amperes	feet from standard compass	feet from steering compass
A cable carrying <u>1</u>	<u>8</u>	<u>6</u>	<u>6</u>
A cable carrying <u>0.8</u>	<u>light in</u>	<u>8</u>	<u>8</u>
A cable carrying <u>0.8</u>	<u>light in</u>	<u>light in</u>	<u>light in</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 none 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 17 May 1915

OR EARLE'S SHIPBUILDING & ENGINEERING COMPANY, LIMITED.

SECRETARY.

GENERAL REMARKS.

This installation of electric light has been well fitted. The materials & workmanship are good. It has been tried under full working conditions & found satisfactory.

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

J. G. MacKillop  
1915/15

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

Committee's Minute