

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 Reg. Book 7467 on the Iron or Steel SS "Urbino" Port belonging to Hull.
 Built at Hull By whom Charles G & 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 Bowens berth, cargo mess room for amidships
Saloon pantry and chart room for saloon acc' and navigation
Wheelhouse for aft; Bowens 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 lamps each of 32 candle power requiring a total current of 1 each lamp Amperes
2 Side light with 1 lamps each of 32 candle power requiring a total current of " " Amperes
12 Cargo lights of 96 sp. 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

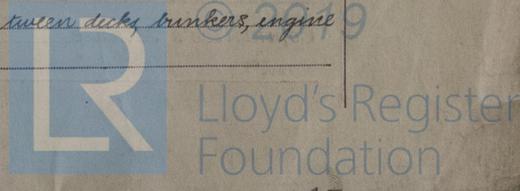
DESCRIPTION OF CABLES.

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



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 brushed with hard wood, except armoured 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 clips

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.

W. S. Hild 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:—

A cable carrying	<u>1</u>	Amperes	<u>8</u>	feet from standard compass	<u>6</u>	feet from steering compass
A cable carrying	<u>0.8</u>	Amperes	<u>light in</u>	feet from standard compass	<u>8</u>	feet from steering compass
A cable carrying	<u>0.8</u>	Amperes	<u>light in</u>	feet from standard compass	<u>light in</u>	feet from steering compass

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

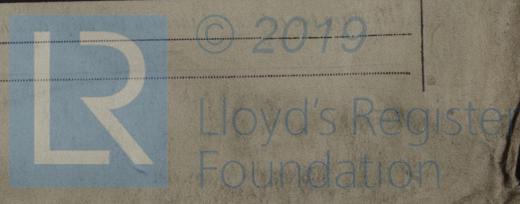
Builder's Signature. Date 17 May 1915 J. G. Mackillop SECRETARY.

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 Surveyor to Lloyd's Register of British and Foreign Shipping. 19/5/15

Committee's Minute



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

Im. 11.13.—Transfer.