

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 23251

Port of Hull Date of First Survey Sep. 5<sup>th</sup> Date of Last Survey Dec 10<sup>th</sup> No. of Visits 8  
 No. in Reg. Book 5 on the ~~Iron~~ Steel Se. St. Maringo Port belonging to Hull  
 Built at Newcastle By whom Northwood & Co. Ld When built 1910  
 Owners J. Wilson Sons & Co. Ld Owners' Address Hull  
 Yard No. Electric Light Installation fitted by Messrs J. Wilson Sons & Co. Ld When fitted 1910

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Four pole compound wound Dynamo by The Brush Co. Ld, coupled direct to a vertical direct acting engine by Messrs Robey & Co. Ld

Capacity of Dynamo 90 Amperes at 100 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed on Starboard side Eng. Room Whether single or double wire system is used double

Position of Main Switch Board Near Dynamo having switches to groups A B C D E of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each, Each light, and group of lights provided with switches as necessary.

If cut outs 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 cessel is wired on the double wire system are cut outs fitted to both flow and return wires or cables of all circuits including lamp circuits Yes

Are the cut outs of non-oxidizable metal Yes and constructed to fuse at an excess of 50 per cent over the normal current

Are all cut outs 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 cut-outs constructed of incombustible materials and fitted on incombustible buses Yes

Total number of lights provided for 133 arranged in the following groups:—

A Eng. Room	33 lights each of	16	candle power requiring a total current of	16	Amperes
B Cargo	36 lights each of	16	candle power requiring a total current of	20	Amperes
C Forecastle	15 lights each of	16	candle power requiring a total current of	6	Amperes
D Amidships	20 lights each of	16	candle power requiring a total current of	8	Amperes
E Saloon	29 lights each of	16	candle power requiring a total current of	13	Amperes
2 Mast head light with	2 lamps each of	32	candle power requiring a total current of	2	Amperes
2 Side light with	2 lamps each of	32	candle power requiring a total current of	2	Amperes

6 Cargo lights of 6 in each, each 16 candle power, whether incandescent or arc lights incandescent

If arc lights, what protection is provided against fire, sparks, &c. No arc lights

Where are the switches controlling the masthead and side lights placed Chart room

## DESCRIPTION OF CABLES.

Main cable carrying	63 Amperes, comprised of	19 wires, each	16 L.S.G. diameter,	.0612 square inches total sectional area
<u>E. St. Maringo</u> Branch cables carrying	16 Amperes, comprised of	7 wires, each	16 L.S.G. diameter,	.0225 square inches total sectional area
<u>Cargo</u> Branch cables carrying	20 Amperes, comprised of	7 wires, each	16 L.S.G. diameter,	.0225 square inches total sectional area
<u>Forecastle</u> Branch cables carrying	6 Amperes, comprised of	7 wires, each	18 L.S.G. diameter,	.0127 square inches total sectional area
<u>Amidships</u> Branch cables carrying	8 Amperes, comprised of	7 wires, each	18 L.S.G. diameter,	.0127 square inches total sectional area
<u>Saloon</u> Branch cables carrying	13 Amperes, comprised of	7 wires, each	16 L.S.G. diameter,	.0225 square inches total sectional area
Leads to lamps carrying	5 Amperes, comprised of	7 wires, each	16 L.S.G. diameter,	.0032 square inches total sectional area
Cargo light cables carrying	20 Amperes, comprised of	7 wires, each	16 L.S.G. diameter,	.0225 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Pure rubber taped, braided and lead covered in accommodation. Steel armoured where exposed.

Joints in cables, how made, insulated, and protected No joints

Are all the joints of cables thoroughly soldered, resin only having been used as a flux — 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 Clipped up under deck, lead covered and armoured.



DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible No

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture Lead covered and armoured ✓

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

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 in holes, through bulkheads, &c. W. I. glands. ✓

How are cables carried through decks in galvanised iron 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 Lead covered and armoured ✓

Are any lamps fitted in coal bunkers No or spaces which may at times be used for cargo, coals, or baggage Yes ✓

If so, how are the lamp fittings and cable terminals specially protected Brass guards. Iron caps. ✓

Where are the main switches and cut outs for these lights fitted in tween decks ✓

If in the spaces, how are they specially protected C. I. boxes. ✓

Are any switches or cut outs fitted in bunkers No. ✓

Cargo light cables, whether portable or permanently fixed portable ✓ How fixed W. I. sockets ✓

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

The installation is new supplied with a voltmeter and also ✓ an amperemeter, fixed on main Sw. Brd.

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and cut-outs fitted in positions not liable to the accumulation of petroleum vapour or gas

Are any switches, cut outs, 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 100 ✓ per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 600 ✓ megohms per statute mile after 24 hours' immersion in seawater.

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.

H. S. Hoag

Electrical Engineers

Date 19 Dec 1910

COMPASSES.

Distance between dynamo or electric motors and standard compass 162' 4"

Distance between dynamo or electric motors and steering compass 154' 0"

The nearest cables to the compasses are as follows:—

A cable carrying 3 Amperes is led into feet from standard compass and into feet from steering compass

A cable carrying — Amperes — feet from standard compass — feet from steering compass

A cable carrying — Amperes — feet from standard compass — 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 Nil ✓ degrees on all courses in the case of the standard compass and Nil ✓ degrees on all courses in the case of the steering compass.

Builder's Signature.

Date

GENERAL REMARKS.

This vessel has been fitted with Electric Lighting Installation as above, tested & found in order and is now respectfully submitted for notation in the Register Book.

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

THE RECORD. Elec. light JWD 23/10

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

