

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 58402

Port of Newcastle-on-Tyne Date of First Survey 25th Apr Date of Last Survey 4th May No. of Visits 2
 No. in Reg. Book on the Iron or Steel "Blackstaff" Port belonging to Epole
 Built at Bill Quay, N. Newcastle-Tyne By whom Wood, Skinner & Co Ltd When built 1910
 Owners John H Wetherall & Co Owners' Address Epole
 Yard No. W. Electric Light Installation fitted by THE NORTHERN ELECTRICAL ENGINEERING AND PLATING CO LTD When fitted 1910

DESCRIPTION OF DYNAMO, ENGINE, ETC.

North Shields
"Castle" Dynamo Compound wound.
30 H.P. Engine
 Capacity of Dynamo 60 Amperes at 80 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Lower part Engine Room Whether single or double wire system is used double
 Position of Main Switch Board alongside dynamo having switches to groups 4 main switches of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each An average of two lights on each switch. Each branch board fixed as near as possible to each respective light
 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 vessel 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 25 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 bases Yes, porcelain & slate

Total number of lights provided for 44 arranged in the following groups:—

Group	Description	Candle Power	Total Current (Amperes)
A	<u>28-16 cp.</u> lights each of <u>10 cp.</u>	<u>320 cp.</u>	<u>22.1</u>
B	<u>2-32 cp.</u> lights each of <u>32 cp.</u>	<u>64 cp.</u>	<u>11.5</u>
C	<u>10</u> lights each of <u>10 cp.</u>	<u>100 cp.</u>	<u>11.2</u>
D	<u>14</u> lights each of <u>10 cp.</u>	<u>140 cp.</u>	<u>11.9</u>
E	<u>2</u> Mast head light with <u>1</u> lamps each of <u>32 cp.</u>	<u>32 cp.</u>	<u>Amperes</u>
	<u>2</u> Side light with <u>1</u> lamps each of <u>32 cp.</u>	<u>32 cp.</u>	<u>Amperes</u>
	<u>4-6 lights</u> Cargo lights of <u>10 cp. p. cp.</u>	<u>40-60 cp.</u>	<u>Incandescent.</u>

If are lights, what protection is provided against fire, sparks, &c. No arcs
 Where are the switches controlling the masthead and side lights placed Wheelhouse

DESCRIPTION OF CABLES.

Main cable carrying 56.4 Amperes, comprised of 19 wires, each 15 L.S.G. diameter, 0.4650 square inches total sectional area
 Branch cables carrying 22.1 Amperes, comprised of 7 wires, each 15 L.S.G. diameter, 0.2822 square inches total sectional area
 Branch cables carrying 11.5 Amperes, comprised of 7 wires, each 18 L.S.G. diameter, 0.1254 square inches total sectional area
 Leads to lamps carrying 11.2 Amperes, comprised of 4 wires, each 18 L.S.G. diameter, 0.2224 square inches total sectional area
 Cargo light cables carrying 4.7 Amperes, comprised of 4 wires, each 2 1/2 L.S.G. diameter, 0.04196 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Pure Rubber, vulcanised Rubber, Taped & Braided.
Engine Room & Deck: Lead Covered & Armd & Gal. Iron Pipes
Accommodation: Lead Covered
 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 Lead Covered & Armoured & Gal. Iron Pipes



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 Lead Covered & Armoured Gal. Iron Pipes.

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 Insulating Ferrules. through bulkheads, &c. none.

How are cables carried through decks Gal. Iron Pipes.

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

If so, how are they protected _____

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 cut outs for these lights fitted _____

If in the spaces, how are they specially protected _____

Are any switches or cut outs fitted in bunkers No.

Cargo light cables, whether portable or permanently fixed permanently. How fixed In Gal. Pipe & L.P. Armoured cable.

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 now supplied with a voltmeter and Marine Dye with Marine Dye an amperemeter, fixed on Main Switchboard

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 98. per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 1000. 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.

FOR THE NORTH HAVEN ELECTRICAL ENGINEERING AND PLATING CO., LTD.

Thomas Harrison Electrical Engineers Date Aug. 26th 1910

COMPASSES.

Distance between dynamo or electric motors and standard compass 45 ft.

Distance between dynamo or electric motors and steering compass 81 ft.

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	<u>50 lbs. lamp</u>	feet from standard compass	feet from steering compass
A cable carrying	Amperes	<u>for compass</u>	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 _____ course in the case of the standard compass and _____ degrees on _____ course in the case of the steering compass.

WOOD, SKINNER & Co., LIMITED.

James Skinner Builder's Signature. Date 26th August 1910.

GENERAL REMARKS. The above installation has been fitted under survey tried and found satisfactory

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

JWD 27/9/10

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

Committee's Minute JSM



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.