Rpt. 13.

Received at London Office 19

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 48050

Port of Newcastle on Tyne Date of First Survey Nov. 21. Date of Last Survey Dec 12th 04 No. of Visits 6

No. in Reg. Book ____ on the Iron or Steel S.S. Arrival Port belonging to London

Built at Bill Quay By whom Wood Skinner & Co Ltd When built 1904

Owners C. Rowbotham Owners' Address London

Yard No. 12 Electric Light Installation fitted by Messrs The Northern Electrical Engineering & Plating Co Ltd When fitted 1904

DESCRIPTION OF DYNAMO, ENGINE, ETC.

ONE 5½"×4 ENGINE BY FOSTER OF LINCOLN WITH ROBINSON GOV 80 LBS COUPLED TO NO 10 H.L DYNAMO COMPOUND WOUND 450 RPM.

Capacity of Dynamo 35 Amperes at 80 Volts, whether continuous or alternating current CONTINUOUS

Where is Dynamo fixed Main Engine Room Whether single or double wire system is used Double

Position of Main Switch Board Main Engine Room having switches to groups 3 main Switches of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each all on one Main board in Engine Room

If cut outs are fitted on main switch board to the cables of main circuits in all cases and on each auxiliary switch board to the cables of auxiliary circuits all cases 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

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 B.V. Wire 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

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

A ____ lights each of ____ candle power requiring a total current of ____ Amperes

B ____ lights each of ____ candle power requiring a total current of ____ Amperes

C ____ lights each of ____ candle power requiring a total current of ____ Amperes

D ____ lights each of ____ candle power requiring a total current of ____ Amperes

E ____ lights each of ____ candle power requiring a total current of ____ Amperes

Mast head light with 1 lamps each of 32 c.p. S.F. candle power requiring a total current of ____ Amperes

Side light with 1 lamps each of 32 c.p. S.F. candle power requiring a total current of ____ Amperes

Cargo lights of 5.16 c.p. Clusters candle power, whether incandescent or arc lights incandescent

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

Where are the switches controlling the masthead and side lights placed Wheel House

DESCRIPTION OF CABLES.

Main cable carrying 35 Amperes, comprised of 4 wires, each 14 L.S.G. diameter, ____ square inches total sectional area

Branch cables carrying ____ Amperes, comprised of ____ wires, each ____ L.S.G. diameter, 1000 square inches total sectional area

Branch cables carrying ____ Amperes, comprised of ____ wires, each 1000 L.S.G. diameter, amps per square inches total sectional area

Leads to lamps carrying ____ Amperes, comprised of ____ wires, each amps L.S.G. diameter, sq in square inches total sectional area

Cargo light cables carrying ____ Amperes, comprised of ____ wires, each per sq in L.S.G. diameter, ____ square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Pure Para Rubber, vulcanised rubber, Braided, taped compounded.

Joints in cables, how made, insulated, and protected Pure Para rubber tape rubber solution compounded tape

Are all the joints of cables thoroughly soldered, resin only having been used as a flux yes 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 at yes

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 iron tubes, Solid Lead wires in part wood casings

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 Iron Tubes

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

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 Tubes *through bulkheads, &c.* Tubes

How are cables carried through decks -do-

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 portable & fixed *How fixed* from fixed plugs

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 Yes *supplied with a voltmeter and* *an amperemeter, fixed* on Switch Board and

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 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.

for THE NORTHERN ELECTRICAL ENGINEERING AND PLATING Co LTD BOROUGH RD, NORTH SHIELDS. C E Smith *Electrical Engineers* *Date* 17th Jany 1905

COMPASSES.

Distance between dynamo or electric motors and standard compass

Distance between dynamo or electric motors and steering compass

The nearest cables to the compasses are as follows :—

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 No. *degrees on* *course in the case of the standard compass and* No. *degrees on* *course in the case of the steering compass.*

WOOD, SKINNER & Co., LIMITED. Director. *Builder's Signature.* *Date* 19th Jany 1905

GENERAL REMARKS. This installation as far as seen appears to be fitted in accordance with the Rules, & is satisfactory.

J. T. Findlay

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

Committee's Minute It is submitted that the notation Elec. Light be recorded in the Reg. Book.

21.1.05

REPORT FORM No. 13.—2m.3.4.

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.