

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 *Blackstaff* on the Iron or Steel *Blackstaff* Port belonging to *Gpool*
 Built at *Bill Quay, N. Newcastle-on-Tyne* By whom *Wood, Skinner & Co Ltd* When built *1910*
 Owners *John H Wetherall & Co* Owners' Address *Gpool*
 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:—
 A *28-16 c.p.* lights each of *32 c.p.* candle power requiring a total current of *22.1* Amperes
 B *2-32 c.p.* lights each of *32 c.p.* candle power requiring a total current of *11.5* Amperes
 C *10* lights each of *16* candle power requiring a total current of *11.2* Amperes
 D *14* lights each of *16* candle power requiring a total current of *11.9* Amperes
 E lights each of candle power requiring a total current of Amperes
 2 Mast head light with 1 lamps each of *32* candle power requiring a total current of Amperes
 2 Side light with 1 lamps each of *32* candle power requiring a total current of Amperes
 4-6 lights Cargo lights of *10 c.p. p.c.p.* candle power, whether incandescent or are lights *Incandescent*
 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, *0.04650* 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 *11.9* Amperes, comprised of *7* wires, each *18* L.S.G. diameter, *0.2224* square inches total sectional area
 Cargo light cables carrying *4.7* Amperes, comprised of *7* 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 & Armoured & 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*

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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 *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.

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	feet from standard compass	feet from steering compass
<i>500. lamp</i>			
<i>for compass</i>			
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 _____ 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.

Thomas Field

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

Committee's Minute



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.