

16 JAN 1925

REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 9267

Port of *Belfast* Date of First Survey *28th Novr. 1924* Date of Last Survey *6th Jan 1925* No. of Visits *7*
 No. in Reg. Book *on the Iron or Steel* *S. S. Antinous* Port belonging to *London*
 Built at *Belfast* By whom *Workman Clark & Co. Ltd.* When built *1915*
 Owners *New Egypt & Devant Shipping Coy. Ltd.* Owners' Address
 Yard No. *115* Electric Light Installation fitted by *Sunderland Forged Eng. Coy. Ltd.* When fitted *1914*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One open type steam engine direct coupled to.
One compound wound continuous rated multipolar dynamo.
 Capacity of Dynamo *90* Amperes at *110* Volts, whether continuous or alternating current *continuous*
 Where is Dynamo fixed *Engine Room* Whether single or double wire system is used *double*
 Position of Main Switch Board *Engine Room* having switches to groups *four* of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each *Engine Room 6st. Bd. 8 switches*
Wheel House 8 switches Saloon 5 switches Amidships 6 switches
 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-oxidizable metal *Yes* and constructed to fuse at an excess of *100* 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 *Yes*
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases *Yes*
 Total number of lights provided for *100* arranged in the following groups:—
 A *Accommodation* lights each of *16cp* candle power requiring a total current of *4* Amperes
 B *Navigation & ord.* lights each of *16cp* candle power requiring a total current of *14* Amperes
 C *Eng. & Boiler Rms.* lights each of *16cp* candle power requiring a total current of *16* 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
 2. Mast head lights with 1. lamps each of *32* candle power requiring a total current of *1.0* Amperes
 2. Side light with 1. lamps each of *32* candle power requiring a total current of *1.0* Amperes
 6 Cargo lights of *200* candle power, whether incandescent or *arc* lights *Yes*
 If are lights, what protection is provided against fire, sparks, &c. *None fitted*

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

DESCRIPTION OF CABLES.

Main cable carrying *90* Amperes, comprised of *19* wires, each *.072* S.W.G. diameter, *.0750* square inches total sectional area
 Branch cables carrying *14* Amperes, comprised of *7* wires, each *.064* S.W.G. diameter, *.0225* square inches total sectional area
20 *16* *0* *7* *.036* *0* *.0070* *0*
 Branch cables carrying *4* Amperes, comprised of *7* wires, each *.029* S.W.G. diameter, *.0045* square inches total sectional area
 BRANCH CABLE TO W/T
 Leads to lamps carrying *4.5* Amperes, comprised of *7* wires, each *.029* S.W.G. diameter, *.0045* square inches total sectional area
20 *0* *3* *.029* *0* *.0045* *0*
 Cargo light cables carrying *5.5* Amperes, comprised of *7* wires, each *.029* S.W.G. diameter, *.0045* square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Tinned copper conductors insulated with pure and vulcanising India Rubbr. Taped and the whole vulcanised together and finished:—
Lead covered Armoured and Braided cables in Machinery and all exposed places.
Lead covered and Braided cables in Accommodation.

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 *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

Are there any joints in or branches from the cable leading from dynamo to main switch board *None.*

How are the cables led through the ship, and how protected *Lead covered, armoured and braided cables secured to beams by galvanized clips and brass screws.*



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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, insulated and braided*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Lead covered, insulated and braided*

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 *Holes lashed with Filin* through bulkheads, &c. *W/T. Packing Glands*

How are cables carried through decks *Leak Tubes made W/T.*

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, insulated and braided*

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 *none*

Where are the main switches and fuses for these lights fitted *none*

If in the spaces, how are they specially protected *no.*

Are any switches or fuses fitted in bunkers *no.*

Cargo light cables, whether portable or permanently fixed *Portable.* How fixed *To Heavy Brass Terminals fitted in Cast Iron Boxes on Deck*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *none*

How are the returns from the lamps connected to the hull *none*

Are all the joints with the hull in accessible positions *none*

Is the installation supplied with a voltmeter *Yes.* and with an amperemeter *Yes.* fixed *Engine 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.

P. Pro Sunderland Forge & Eng. Co. Ltd.

J. Thompson

Electrical Engineers

Date

12 JAN '25

COMPASSES.

Distance between dynamo or electric motors and standard compass *90 feet*

Distance between dynamo or electric motors and steering compass *85 feet*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
5.5	12	6	
3	Lead into	feet from standard compass	feet from steering compass
3	Lead into	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 *all* course in the case of the standard compass and *no* degrees on *all* course in the case of the steering compass.

PRO WORKMAN, CLARK & CO., LIMITED,

W. A. Skumble

ASSISTANT SECRETARY.

Builder's Signature.

Date

14-1-25

GENERAL REMARKS.

This installation has been fitted in accordance with the Rules & has satisfactorily in trial under full load.

Dr. G. S.
see reply report.

Elec. Light.
W. A. Skumble
19/1/25.

William Butler

Surveyor to Lloyd's Register of Shipping.

Committee's Minute