

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 32533

Port of Hull. Date of First Survey 18/10/20 Date of Last Survey 7/3/21 No. of Visits 6  
 No. in Reg. Book on the Iron or Steel S. T. WILLIAM, CHATWOOD. Port belonging to  
 Built at Grook By whom Grook S. R. & Co. When built 1921.  
 Owners Admiralty Owners' Address  
 Yard No. Electric Light Installation fitted by Dwyer, Curtis & Co. Ltd., Hull. When fitted 1921.

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Electric Motors Dynamo revs 700  
Robey Engine  
 Capacity of Dynamo 10 Amperes at 100 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed Starboard side Engine room Whether single or double wire system is used Double  
Navigation, Fishing, Deck  
 Position of Main Switch Board Bulkhead over Dynamo having switches to groups also General lighting of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each Navigation board in Wheelhouse  
6 Branch switches, 1 Change over switch, other switches in convenient places to suit  
lights  
 If fuses are fitted on main switch board to the cables of main circuit 27 main fuses 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-oxidisable metal Yes and constructed to fuse at an excess of 50 per cent over the normal current  
In distribution box  
 Are all fuses fitted in easily accessible positions on Navigation 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 37 arranged in the following groups:—  
 A 22 General lights each of 16 candle power requiring a total current of 5.5 Amperes  
 B 11 Navigation lights each of 16 candle power requiring a total current of 2.9 Amperes  
 C 4 Portables lights each of 32 candle power requiring a total current of 1.6 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  
3 Mast head lights with 1 lamps each of candle power requiring a total current of Amperes  
2 Side lights with 1 lamps each of candle power requiring a total current of Amperes  
4 Portable Cargo lights of with 1 lamp each 32 candle power, whether incandescent or arc lights Incandescent  
 If arc lights, what protection is provided against fire, sparks, &c. no Arc lamps

Where are the switches controlling the masthead and side lights placed Wheelhouse

## DESCRIPTION OF CABLES.

Main cable carrying 10 Amperes, comprised of 7 wires, each  $\frac{1}{18}$  S.W.G. diameter, .0125 square inches total sectional area  
 Branch cables carrying 6 Amperes, comprised of 4 wires, each  $\frac{1}{20}$  S.W.G. diameter, .007 square inches total sectional area  
 Branch cables carrying 4 Amperes, comprised of 4 wires, each  $\frac{1}{20}$  S.W.G. diameter, .007 square inches total sectional area  
 Leads to lamps carrying Amperes, comprised of 3 wires, each  $\frac{1}{20}$  S.W.G. diameter, .003 square inches total sectional area  
 Cargo light cables carrying Amperes, comprised of wires, each S.W.G. diameter, square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

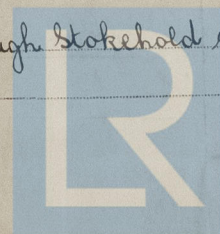
All cables lead covered Vulcanized rubber.

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

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances — 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

How are the cables led through the ship, and how protected Engine room run on tray, through Starboard side on tray, through Bunker in Galvanized steel conduit.



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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

*Galvanized steel conduit*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Head covered cable*

What special protection has been provided for the cables near boiler casings *Head covered cable*

What special protection has been provided for the cables in engine room *Head covered cable*

How are cables carried through beams *Head bushes* through bulkheads, &c. *Watertight glands*

How are cables carried through decks *Deck pipes*

Are any cables run through coal bunkers *Yes* or cargo spaces or spaces which may be used for carrying cargo, stores, or baggage

If so, how are they protected *Galvanized steel conduit*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *Lamps fitted in fish holds*

If so, how are the lamp fittings and cable terminals specially protected *All W.T. Admiralty plugs with glands*

Where are the main switches and fuses for these lights fitted *Engine room*

If in the spaces, how are they specially protected *Galvanized steel conduit*

Are any switches or fuses fitted in bunkers *No*

Cargo light cables, whether portable or permanently fixed *Portable hand lamps* How fixed *Fitted to plug connections*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *Double wire*

How are the returns from the lamps connected to the hull

Are all the joints with the hull in accessible positions

Is the installation supplied with a voltmeter *Yes* and with an amperemeter *Yes*, fixed *Main board in 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.

*W. H. Gregory* Manager

Electrical Engineers

Date *22nd March 1921*

**COMPASSES.**

Distance between dynamo or electric motors and standard compass *40 ft*

Distance between dynamo or electric motors and steering compass *40 ft*

The nearest cables to the compasses are as follows:—

A cable carrying *2* Amperes *To* feet from standard compass feet from steering compass

A cable carrying *2* Amperes *To* 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* course 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.**

*The materials & workmanship are good on completion. The installation was tried under full load with satisfactory results. The installation was also examined & tested by the Admiralty Electrical Engineers.*

*It is submitted that this vessel is eligible for*

**THE RECORD.** *Elec Light* *Recd 27/4/21*

*G. Bartlett*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.