

TUE. 30 NOV. 1920

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 10781

Port of Southampton Date of First Survey 11th June Date of Last Survey 2nd Nov. No. of Visits 3
 No. in Reg. Book on the Steel S.S. Trh. "THOMAS DANIELS" Port belonging to
 Built at Paisley By whom Barr, Mc Lachlan & Co. Ltd When built 1918
 Owners Owners' Address
 Yard No. Electric Light Installation fitted by H.M. Dockyard, Portsmouth When fitted 1920

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Robey Engine No. 37255, coupled to a 1 K.W. Dynamo No. 30604.

Capacity of Dynamo 10 Amperes at 100 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 A and B of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each None

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 50 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 36 arranged in the following groups:—

A	20	lights each of (metallic) 16	candle power requiring a total current of	4	Amperes
	2	lights each of (carbon) 16	candle power requiring a total current of	1.2	Amperes
		lights each of	candle power requiring a total current of		Amperes
B	6	lights each of (metallic) 32	candle power requiring a total current of	2.4	Amperes
	2	lights each of (carbon) 32	candle power requiring a total current of	2.4	Amperes
	3	Mast head lights with 1 lamp each of (carbon) 16	candle power requiring a total current of	1.8	Amperes
	2	Side lights with 1 lamp each of (carbon) 16 & 32	candle power requiring a total current of	1.8	Amperes
	1	Stem Cargo lights of (metallic) 16	candle power, whether incandescent or arc lights	2	

If arc lights, what protection is provided against fire, sparks, &c. None

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

DESCRIPTION OF CABLES.

Main cable carrying 10 Amperes, comprised of 3 wires, each 18 S.W.G. diameter, .00532 square inches total sectional area
 Branch cables carrying 7 Amperes, comprised of 3 wires, each 18 S.W.G. diameter, .00532 square inches total sectional area
 Branch cables carrying 3 Amperes, comprised of 3 wires, each 18 S.W.G. diameter, .00532 square inches total sectional area
 Leads to lamps carrying Amperes, comprised of 1 wires, each 17 S.W.G. diameter, .00246 square inches total sectional area
 Cargo light cables carrying Amperes, comprised of Amperes wires, each Amperes S.W.G. diameter, Amperes square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

The wiring is carried out with Admiralty pattern lead covered cable and protected as detailed below.

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 None 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 None

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 clipped on to Bulkheads, lead sheathing and run in conduit through bunkers.



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DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *yes, except in bunkers when full of coal.*

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *Lead sheathing.*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Run in channel plate to allow 1 of air space*

What special protection has been provided for the cables near boiler casings *Not near boiler casing.*

What special protection has been provided for the cables in engine room *Lead sheathing.*

How are cables carried through beams *Holes, lead lined* through bulkheads, &c. *Watertight glands.*

How are cables carried through decks *Watertight deck pipes.*

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 *Cable run in Conduit pipes in bunkers, otherwise lead sheathing.*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *yes in Fish hold.*

If so, how are the lamp fittings and cable terminals specially protected *Glass shades & metal guards. No exposed terminals.*

Where are the main switches and fuses for these lights fitted *Switches in Fish hold. Fuses in Galley.*

If in the spaces, how are they specially protected *Switches fitted close under deck, near the hatchway.*

Are any switches or fuses fitted in bunkers *No*

Cargo light cables, whether portable or permanently fixed *None* How fixed *—*

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 *—*

Is the installation supplied with a voltmeter *yes*, and with an amperemeter *yes*, fixed *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 _____ 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.

Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass *48 feet*

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

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
2	9	1 1/2	
7	16	4	
—	—	—	

Have the compasses been adjusted with and without the electric installation at work at full power *No*

The maximum deviation due to electric currents, etc., was found to be _____ degrees on _____ course in the case of the standard compass and _____ degrees on _____ course in the case of the steering compass.

Builder's Signature.

Date

GENERAL REMARKS.

The Electrical Installation has been fitted in accordance with the rule requirements and the Specification, but has not yet been tried under working conditions.

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

Rel 14/12/20

C. H. Boyle

Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 17 DEC. 1920*

FRI. 24 FEB. 1922