

MON. 23 JUN. 1919

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1153

Port of Liverpool N.S. Date of First Survey March 13th Date of Last Survey May 2nd No. of Visits 8
 No. in g. Book on the Iron or Steel Wood S. S. "Hawthorn" Port belonging to Liverpool N.S.
393 Built at Liverpool N.S. By whom Southern Salvage Co., When built 1919
 Owners Imperial Munitions Board Owners' Address Ottawa
 Ord No. Electric Light Installation fitted by Imperial Munitions Board When fitted 1919

DESCRIPTION OF DYNAMO, ENGINE, ETC.

1-10 Kw. High Speed Enclosed Goldie McCulloch Engine, direct coupled to General Electric Coy's Generator

Capacity of Dynamo 86 Amperes at 120 Volts, whether continuous or alternating current CONTINUOUS
 There is Dynamo fixed Bottom E.R. Platform Whether single or double wire system is used Double
 Position of Main Switch Board " " " having switches to groups Six of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each All Distribution Boards.

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
 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 Cartridge Type of wire fuses are used
 Are permanent instructions fitted on or near each switch board giving particulars of proper size of fuse for each circuit Cartridge
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases Yes

Total number of lights provided for 137 arranged in the following groups:—

Navigation	5	lights each of	32	candle power requiring a total current of	51	Amperes
#1 Accom.	40	lights each of	16	candle power requiring a total current of	22	Amperes
2	24	lights each of	16	candle power requiring a total current of	13	Amperes
Cargo	36	lights each of	16	candle power requiring a total current of	11	Amperes
Wireless		lights each of		candle power requiring a total current of	12	Amperes
Machinery	38	lights each of	16	candle power requiring a total current of	16½	Amperes
1 Mast head light with	2	lamps each of	32	candle power requiring a total current of	1	Amperes
2 Side light with	2	lamps each of	32	candle power requiring a total current of	2	Amperes

22 Cargo lights of as above candle power, whether incandescent or arc lights Incandescent
 Are lights, what protection is provided against fire, sparks, &c. -----

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

DESCRIPTION OF CABLES.

Cable	Amperes	Comprised of	Wires	Each	Mils.	S.W.G. diameter	Circular Mills	square inches total sectional area
in cable carrying	83	19	wires, each	74.5	105,500	✓	105,500	✓
inch cables carrying	22	7	wires, each	48.6	16,510	✓	16,510	✓
inch cables carrying	12	7	wires, each	38.5	10,380	✓	10,380	✓
ds to lamps carrying	3	7	wires, each	24.2	4107	✓	4107	✓
go light cables carrying	3	61	wires, each	.010	6530	✓	6530	✓

DESCRIPTION OF INSULATION, PROTECTION, ETC.

1/32" of 30% Para Rubber, Taped Two Braids & Compounded. Drawn into Sheradised Conduit
Cast Iron W.T. junction boxes

Are cables, how made, insulated, and protected Extension Box system employing Porcelain Extension boxes
in Water tight iron junction boxes.

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 Yes

Are there any joints in or branches from the cable leading from dynamo to main switch board No

Are the cables led through the ship, and how protected As above, in 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 In Conduit

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

What special protection has been provided for the cables near boiler casings Ditto

What special protection has been provided for the cables in engine room Ditto

How are cables carried through beams --- through bulkheads, &c. W.T. Glands ✓

How are cables carried through decks W.T. Deck 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 Peep Deck

If so, how are they protected Conduit

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

If so, how are the lamp fittings and cable terminals specially protected Fastened in between Beams, Cast Iron Fittings & Guards

Where are the main switches and fuses for these lights fitted Peep Deck Alleyway

If in the spaces, how are they specially protected ---

Are any switches or fuses fitted in bunkers No

Cargo light cables, whether portable or permanently fixed Portable How fixed Plug & Switch in W.T. Box

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 Main Switchboard

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.

Imperial Maritime Board for Electrical Engineers Date

COMPASSES.

Distance between dynamo or electric motors and standard compass Eighty six feet

Distance between dynamo or electric motors and steering compass Eighty feet

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
5.5	10	9	

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 Nil degrees on --- course in the case of the steering compass.

ROBERTS SALVAGE CO., LIMITED.

Builder's Signature. Date

GENERAL REMARKS.

The above installation has been satisfactorily fitted on board, materials & workmanship are good. It has been tried out under full working conditions with satisfactory results.

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

Y. Moon

Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 27 JUN. 1919

FRI. AUG. 15. 1919
TUE. 24 FEB. 1920



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