

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 59147

Port of Glasgow Date of First Survey 28.3.19 Date of Last Survey 12.9.19 No. of Visits 10
 No. in Reg. Book on the Iron or Steel H.M. S.M.S. "Repton" Port belonging to London
 Built at Point House By whom Messrs A.G. Inglis When built 1919
 Owners The Admiralty Owners' Address London
 Yard No. Electric Light Installation fitted by Messrs Selford Grier & McKay When fitted 1919

DESCRIPTION OF DYNAMO, ENGINE, ETC.

2 enclosed forced lubrication engines direct coupled to protected type compound wound multipolar dynamos.
 Capacity of Dynamos each 120 Amperes at 100 Volts, whether continuous or alternating current continuous
 Where ^{are} Dynamos sized Lower engine room Whether single or double wire system is used double
 Position of Main Switch Board near stbd. dynamo having switches to groups 6 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 none 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 163 arranged in the following groups:—
 A 33 lights each of 16 candle power requiring a total current of 17 Amperes
 B 22 lights each of 16 candle power requiring a total current of 11 Amperes
 C 48 lights each of 12 = 32 candle power requiring a total current of 30 Amperes
 D 35 lights each of 16 candle power requiring a total current of 18 Amperes
 E 20 lights each of various candle power requiring a total current of 8 Amperes
1 Mast head light with 1 lamps each of 16 candle power requiring a total current of 1/2 Amperes
1 Side light with 1 lamps each of 16 candle power requiring a total current of 1 1/2 Amperes
2 Cargo lights of 32 candle power, whether incandescent or arc lights Incandescent

If arc lights, what protection is provided against fire, sparks, &c.

Where are the switches controlling the masthead and side lights placed Chart Room

DESCRIPTION OF CABLES.

Main cable carrying 120 Amperes, comprised of 37 wires, each 16 S.W.G. diameter, .117 square inches total sectional area
 Branch cables carrying 17 Amperes, comprised of 19 wires, each 20 S.W.G. diameter, .019 square inches total sectional area
 Branch cables carrying 11 Amperes, comprised of 7 wires, each 18 S.W.G. diameter, .012 square inches total sectional area
 Leads to lamps carrying 3 Amperes, comprised of 1 wires, each 17 S.W.G. diameter, .002 square inches total sectional area
 Cargo light cables carrying 6 Amperes, comprised of 7 wires, each 18 S.W.G. diameter, .012 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Vulcanised india rubber taped & lead covered.

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 — 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 no

How are the cables led through the ship, and how protected clipped to perforated sheet trays



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 + protected by sheet metal cover where exposed to mechanical injury.

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

What special protection has been provided for the cables near boiler casings lead covered.

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

How are cables carried through beams carried under beams through bulkheads, &c. watertight Gland.

How are cables carried through decks Packed watertight deck tube.

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 tubed in coal bunkers.

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 well glass with cast metal guard.

Where are the main switches and fuses for these lights fitted engine room.

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 cast metal connection 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 on 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 —

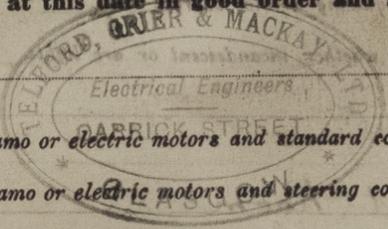
Are any switches, fuses, or joints of cables fitted in the pump room or companion —

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 2500 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 10-11-19

COMPASSES.

Distance between dynamo or electric motors and standard compass 24 feet to Circulator.

Distance between dynamo or electric motors and steering compass 24 feet to Circulator.

The nearest cables to the compasses are as follows:—

A cable carrying	<u>8</u> Amperes	<u>20</u> feet from standard compass	<u>10</u> feet from steering compass
A cable carrying	<u>1/2</u> Amperes	<u>3</u> feet from standard compass	<u>3</u> feet from steering compass
A cable carrying	<u>—</u> Amperes	<u>—</u> feet from standard compass	<u>—</u> 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 any course in the case of the standard compass and Nil degrees on any course in the case of the steering compass.

A. & J. INGLIS, Limited Builder's Signature. Date 13th Nov 1919.

GENERAL REMARKS.

This installation has been fitted on board under special survey tested under full working conditions in the presence of an Admiralty Inspecting Officer & found satisfactory.

It is submitted that this vessel is eligible for THE RECORD ELEC. LIGHT. 20/11/19. J. Stanley Rankin. Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 18 NOV 1919
Elec. Light. JMA



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

16.116—Transfer.