

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 41556

Port of Glasgow Date of First Survey 6-10-21 Date of Last Survey 17-11-21 No. of Visits 3
 No. in Reg. Book on the Iron or Steel S.S. "WINDERMERE" Port belonging to London
 Built at Port Glasgow By whom Messrs Macdowell & Murray When built 1921
 Owners Yickers Ltd Owners' Address London
 Yard No. 303 Electric Light Installation fitted by Messrs Macdowell & Murray When fitted 1921

— TOTAL KW = 7.5 —

DESCRIPTION OF DYNAMO, ENGINE, ETC.
Compound Wound Dynamo, coupled direct on same bedplate to One "Robey" 5 1/2 x 5" open fronted vertical steam engine.

Capacity of Dynamo 75 Amperes at 100 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Steering Gear Platform Whether single or double wire system is used Double

Position of Main Switch Board Bulkhead, alongside Dynamo having switches to groups A, B, C, D, E, F of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each A, Navigation (Chart Room): 8 Circuits B, Wireless C, Pantry 5 Circuits; D, Engine Room Entrance, 6 circuits; E, Crew's Aft, 6 circuits F, Engine Room, 5 Circuits.

If fuses are fitted on main switch board to the cables of main circuit Yes and on each auxiliary ^{FUSE} 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 25% 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 109 arranged in the following groups:—

A Chart Room:-	16	lights each of 8 c.p. 16 c.p. 32 c.p.	candle power requiring a total current of	12	Amperes
B Wireless:-		lights each of <u>not listed</u>	candle power requiring a total current of	—	Amperes
C Pantry:-	22	lights each of 16	candle power requiring a total current of	13.2	Amperes
D Officers:-	25	lights each of 16	candle power requiring a total current of	15	Amperes
E Aft:-	26	lights each of 16	candle power requiring a total current of	15.6	Amperes
F Engine Room:-	21	lights each of 16	candle power requiring a total current of	12	Amperes
	2	Mast head light with 1 lamp each of 32 D.F.	candle power requiring a total current of	1.2	Amperes
	2	Side light with 1 lamp each of 32 D.F.	candle power requiring a total current of	1.2	Amperes
	5	Cargo lights of 5 lamps of 16	candle power, whether incandescent or arc lights included in above		

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 67 Amperes, comprised of 19 wires, each 16 S.W.G. diameter, .0600 square inches total sectional area
 Branch cables carrying 15.6 Amperes, comprised of 7 wires, each 22 S.W.G. diameter, .0045 square inches total sectional area
 Branch cables carrying — Amperes, comprised of — wires, each — S.W.G. diameter, — square inches total sectional area
 Leads to lamps carrying 3 Amperes, comprised of 3 wires, each 20 S.W.G. diameter, .0030 square inches total sectional area
 Cargo light cables carrying 3 Amperes, comprised of 3 wires, each 20 S.W.G. diameter, .0030 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Pure Para Rubber; Vulcanized Rubber; taped; Lead Covered; Bedding of Compounded Gutta; Armoured.

Joints in cables, how made, insulated, and protected no Joints on ship.

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 no

How are the cables led through the ship, and how protected Clipped to Bulk or Bulkheads; Lead Covered and Armoured in holds, etc; Lead Covered in Accommodation



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 G.I. Tubes

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Lead Covered and Armoured

What special protection has been provided for the cables near boiler casings Lead Covered and Armoured

What special protection has been provided for the cables in engine room Lead Covered and Armoured.

How are cables carried through beams Lead Liners through bulkheads, &c. W.T. Stuffing Glands

How are cables carried through decks G.I. Tubes, flanged to Decks, Jamb nuts underneath

Are any cables run through coal bunkers NO 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 and Armoured.

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 _____

Where are the main switches and fuses for these lights fitted _____

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 Power Sockets & Plugs.

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 2,500 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.

Haddock & Co., Ltd. Electrical Engineers Date 18th Nov. 1921

COMPASSES.

Distance between dynamo or electric motors and standard compass 80 feet.

Distance between dynamo or electric motors and steering compass 80 feet

The nearest cables to the compasses are as follows:—

A cable carrying	<u>12</u>	Amperes	<u>10</u>	feet from standard compass	<u>12</u>	feet from steering compass
A cable carrying	<u>.6</u>	Amperes	<u>3</u>	feet from standard compass	<u>3</u>	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 _____ course in the case of the standard compass and _____ degrees on _____ course in the case of the steering compass.

M. W. Peggall Builder's Signature. Date 22. Nov. 1921

GENERAL REMARKS.

This installation has been fitted on board under special survey. Tested in our full working conditions found satisfactory.

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

FEE £4.10.0 at 29.11.21. JHB 22/11/21 J. Rankin
Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 28 NOV 1921
Elec. Light.

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

HC
29.11.21

2m.11.10—Transfer.

