

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 15348.

Port of Leith Date of First Survey 29.10.17 Date of Last Survey 2.5.18 No. of Visits 6
 No. in Book on the Iron or Steel S/S 'WELL PARK' Port belonging to Grunth
 Built at Grangemouth By whom Grunth & Grangemouth S.B. Coy When built 1918
 Owners The Edinburgh Line Steamers Owners' Address _____
 No. 371 Electric Light Installation fitted by Messrs. Clarke Chapman & Co. When fitted 1918.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

A single cylinder double acting open type vertical engine direct coupled to a continuous current compound wound dynamo
 Capacity of Dynamo 50 Amperes at 100 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed in Engine Room Whether single or double wire system is used Double
 Position of Main Switch Board Near dynamo having switches to groups A B C & D of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Each light & group of lights provided with switches as required

Are cut outs 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
 Are fuses wired on the double wire system are cut outs fitted to both flow and return wires or cables of all circuits including lamp circuits Yes
 Are the cut outs of non-oxidizable metal Yes and constructed to fuse at an excess of 50% per cent over the normal current
 Are all cut outs 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 cut-outs constructed of incombustible materials and fitted on incombustible bases Yes slate & porcelain

Total number of lights provided for 95 arranged in the following groups:-

Balloon & Forward	36 lights each of	16	candle power requiring a total current of		Amperes
Engines & Aft	37 lights each of	16	candle power requiring a total current of	20.7	Amperes
Engine Room	22 lights each of	16	candle power requiring a total current of	12.3	Amperes
Decks	lights each of	-	requiring a total current of	2.5	Amperes
	lights each of	-	requiring a total current of	-	Amperes
Mast head light with	1 lamp each of		candle power requiring a total current of	1.1	Amperes
Side light with	1 lamp each of		candle power requiring a total current of	2.2	Amperes
Cargo lights	0		candle power, whether incandescent or arc lights	incandescent	

Are the switches controlling the masthead and side lights placed in Chart Room

DESCRIPTION OF CABLES.

Main cable carrying 50 Amperes, comprised of 7 wires, each 14 L.S.G. diameter, .035 square inches total sectional area
 Branch cables carrying 20.1 Amperes, comprised of 7 wires, each 20 L.S.G. diameter, .0070 square inches total sectional area
 Branch cables carrying 12.3 Amperes, comprised of 1 wires, each 14 L.S.G. diameter, .0050 square inches total sectional area
 Leads to lamps carrying .56 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, .0018 square inches total sectional area
 Cargo light cables carrying 3.3 Amperes, comprised of 168 wires, each 39 L.S.G. diameter, .0050 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Vulcanized india rubber taped & braided & lead covered where exposed steel
 Armoured overall
 Joints in cables, how made, insulated, and protected No joints except mechanical ones
 Are all the joints of cables thoroughly soldered, resin only having been used as a flux 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
 How are the cables led through the ship, and how protected Lead covered & armoured cables run through holds & clipped to underside of deck with strong galvanized iron clips.

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DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *No*

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *Lead covered & steel*
Armoured cable

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

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

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

How are cables carried through beams *in lead bushes* through bulkheads, &c. *in WT glands*

How are cables carried through decks *in galvanized iron deck tubes*

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 *Lead covered & steel Armoured cables*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coats, or baggage *No*

If so, how are the lamp fittings and cable terminals specially protected -

Where are the main switches and cut outs for these lights fitted -

If in the spaces, how are they specially protected -

Are any switches or cut outs fitted in bunkers *No*

Cargo light cables, whether portable or permanently fixed *portable* How fixed *to WT Connection Boxes*

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

How are the returns from the lamps connected to the hull -

Are all the joints with the hull in accessible positions -

Is the installation is *now* supplied with a voltmeter and *also* an amperemeter, fixed *on Switchboard*

FOR CARRYING PETROLEUM.

Are all switches and cut-outs fitted in positions not liable to the accumulation of petroleum vapour or gas -

Are any special cables fitted in the pump room or companion -

How are the lamps supplied in positions liable to the accumulation of vapour or gas -

The copper used is guaranteed to be of *100* per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of *600* megohms per statute mile after 24 hours' immersion in water.

The foregoing statements are a correct description of the electrical installation on this vessel and we declare that it is at this date in good order and safe working order.

For Clarke, Chapman & Co., Ltd.

W. A. Morrison Electrical Engineer
Director

COMPASSES.

Distance between dynamo or electric motors and standard compass *68 ft*

Distance between dynamo or electric motors and steering compass *62 "*

The nearest cables to the compasses are as follows:—

A cable carrying	.56	Amperes	12	feet from standard compass	6	feet from steering compass
A cable carrying	.56	Amperes	6	feet from standard compass	12	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* course in the case of the steering compass.

FOR THE GREENOCK AND GRANDMOUTH DOCKYARD CO., LD

Aspence Millar DIRECTOR

Builder's Signature. Date *June 3rd 1918*

GENERAL REMARKS.

This installation appears to have been fitted in a satisfactory manner and in accordance with the Society's rule requirements.

THE RECORD. Elec. light. JWD. 7/6/18

Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

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