

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 26754

Port of Glasgow. Date of First Survey 2nd June Date of Last Survey 23rd June No. of Visits 12.
 No. in on the ~~Iron~~ Steel S/S "FELSPAR" Port belonging to
 Reg. Book 2 in dupl. Built at Port Glasgow By whom A. Rodgers & Co (No 406) When built 1908.
 Owners W. Robertson Esq. Owners' Address Glasgow.
 Yard No. 406 Electric Light Installation fitted by J. Espie & Co When fitted 1908.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One open fronted 5 1/2" x 5" vertical engine, coupled direct to one Compound wound multipolar dynamo, capable of giving out 50 ampx 80 volts x 400 hrs. pr. min.
 Capacity of Dynamo 50 Amperes at 80 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Aft end of Engine Room Whether single or double wire system is used double wire.
 Position of Main Switch Board near dynamo having switches to groups A B C D of lights, &c., as below
 Positions of auxiliary ~~switch~~ fuse boards and numbers of switches on each Aft Cabin, Chart Room & Forecastle.

If cut outs 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 cut outs fitted to both flow and return wires or cables of all circuits including lamp circuits yes.

Are the cut outs of non-oxidisable metal yes and constructed to fuse at an excess of 100 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.

Total number of lights provided for 52 arranged in the following groups:—

A Midship & fwd	15 lights each of	16	candle power requiring a total current of	10.5	Amperes
B Cluster Sigs Lamp	20 lights each of	16 & 32	candle power requiring a total current of	13.7 16.8	Amperes
C Engine Room	8 lights each of	16	candle power requiring a total current of	4.5 5.6	Amperes
D Aft.	9 lights each of	16	candle power requiring a total current of	5 6.3	Amperes
E	lights each of		candle power requiring a total current of		Amperes
two Mast head light with	one lamp each of	32	candle power requiring a total current of	1.5	Amperes
two Side light with	one lamp each of	32	candle power requiring a total current of	1.5	Amperes
two Cargo lights	with 8 lamps each.	16	candle power, whether incandescent or arc lights	incandescent	

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

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

DESCRIPTION OF CABLES.

Main cable carrying	40 Amperes, comprised of	37 wires, each	18 L.S.G. diameter,	.0670 square inches total sectional area
Branch cables carrying	10.5 Amperes, comprised of	7 wires, each	18 L.S.G. diameter,	.0127 square inches total sectional area
Branch cables carrying	16.8 Amperes, comprised of	7 wires, each	17 L.S.G. diameter,	.0172 square inches total sectional area
Leads to lamps carrying	.7 Amperes, comprised of	3 wires, each	20 L.S.G. diameter,	.003 square inches total sectional area
Cargo light cables carrying	5.6 Amperes, comprised of	225 wires, each	40 L.S.G. diameter,	.004 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

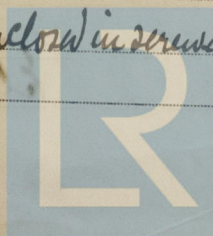
pure vulcanized rubber taped & braided 2500 megohms.
lead covered Forward, Midship & Aft. Galvanized Armouring in Eng. Rm. enclosed in screws
iron tubes in Hold & up marks, etc.

Joints in cables, how made, insulated, and protected There are no joints in cable, they are all run direct to distribution boxes, and branch out from there. only soldering is for thimbles at ends of cable.

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 none in such spaces.

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 run under deck, along ship side, enclosed in screwed iron tubes.



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 screwed iron tubes.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat screwed iron tubes, or armouring

What special protection has been provided for the cables near boiler casings screwed iron tubes, or armoured wire.

What special protection has been provided for the cables in engine room armoured wire.

How are cables carried through beams through in iron tubes through bulkheads, &c. screwed iron tubes

How are cables carried through decks screwed tubes flanged to deck, standing about 18" above deck.

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 screwed iron tubes.

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 none

Where are the main switches and cut outs for these lights fitted none

If in the spaces, how are they specially protected none

Are any switches or cut outs fitted in bunkers none

Cargo light cables, whether portable or permanently fixed portable 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 —

The installation is also supplied with a voltmeter and an ammeter, fixed Main Switch Board

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and cut-outs fitted in positions not liable to the accumulation of petroleum vapour or gas ✓

Are any switches, cut outs, 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 100 per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 2500 megohms per statute mile after 24 hours' immersion in seawater.

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.

James Espe

Electrical Engineers

Date 18th May 1908

COMPASSES.

Distance between dynamo or electric motors and standard compass 15 feet.

Distance between dynamo or electric motors and steering compass 100 feet.

The nearest cables to the compasses are as follows:—

A cable carrying	<u>40</u>	Amperes	<u>15</u>	feet from standard compass	<u>100</u>	feet from steering compass
A cable carrying	<u>16</u>	Amperes	<u>15</u>	feet from standard compass	<u>10</u>	feet from steering compass
A cable carrying	<u>7</u>	Amperes	<u>5</u>	feet from standard compass	<u>1</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 ✓ degrees on ✓ course in the case of the standard compass and ✓ degrees on ✓ course in the case of the steering compass. ✓

A. Rodger Esq

Builder's Signature.

Date 1st July 1908

GENERAL REMARKS.

This installation was fitted on board under Special Survey & tested under full working load & found satisfactory.

It is submitted that this vessel is eligible for the record 'Elec Light' ARRL 8.7.08

C. H. Pilditch.

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

Committee's Minute

Elec. Light 7/11



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