

006067-006074-013413

LETTER	POSITION	No OF SWORN
A	Chart Room	4
B	Eng. Pass. aft. Starb.	10
D	" " " "	4
G	Passage Aft Post	6
H	Eng. Pass. aft. Starb.	10
J	1 <sup>st</sup> Cl. Vestibule Awn. Deck	8
L	" " " "	8
M	Eng. Room Aft	8

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LETTER	CIRCUIT.	LIGHTS	MOTORS	RADIATORS	HEATERS	AMPS
A	Navigation & Officers	80				20
B	3 <sup>rd</sup> Cl. Mail Rm., & Engineers	298				70
C	Wireless					25
D	Emergency	95				25
E	Spare					
F	Spare					
G	Thermotank Ventilating		6			100
H	Ventilating Fans		9			73
J	Heating			5	2 Fires	30
K	Shore Connection					
L	1 <sup>st</sup> Cl. Accommodation	356	3			90
M	Engine Room	171				45

TOTALS

1000 Lights  
 18 Motors  
 5 Radiators  
 2 Grills  
 2 Fires } 455 Amps

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# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 41632

Port of Glasgow. Date of First Survey 9-6-21 Date of Last Survey 15-12-21 No. of Visits 4  
 No. in Reg. Book on the Iron or Steel SS 'SOOTIA' Port belonging to Dublin  
 Built at Dumbarton By whom Messrs W. Denny Bros When built 1921  
 Owners L.N.W. Railway Owners' Address \_\_\_\_\_  
 Yard No. 1037 Electric Light Installation fitted by Messrs W. Denny Bros When fitted 1921

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

TOTAL KW. - 106

2-50 K.W. De-Laval Steam Generators, compound, wound, 1,500 Revs. 110 Volts.  
One 6 KW. emergency petrol driven dynamo  
 Capacity of Dynamo 455 Amperes at 110 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  
 Position of Main Switch Board Aft end of Engine Room having switches to groups 12 of light &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each  
See attached list.

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 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 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 1,000 arranged in the following groups:-

Group	Description	Quantity	Candle Power	Current (Amperes)
A	lights each of			
B	lights each of			
C	lights each of			
D	lights each of			
E	lights each of			
	<u>4 Mast head light with 1 lamps each of</u>	<u>32</u>		<u>4.6</u> Amperes
	<u>4 Side light with 1 lamps each of</u>	<u>32</u>		<u>4.6</u> Amperes
	<u>4 Cargo lights of</u>	<u>128</u>		<u>Incandescent.</u>

If arc lights, what protection is provided against fire, sparks, &c. None fitted.  
 Where are the switches controlling the masthead and side lights placed In Chart Room.

## DESCRIPTION OF CABLES.

Main cable carrying 456 Amperes, comprised of 237 wires, each .103 S.W.G. diameter, .3 square inches total sectional area  
 Branch cables carrying 50 Amperes, comprised of 19 wires, each .052 S.W.G. diameter, .04 square inches total sectional area  
 Branch cables carrying 100 Amperes, comprised of 37 wires, each .064 S.W.G. diameter, .12 square inches total sectional area  
 Leads to lamps carrying 70 Amperes, comprised of 19 wires, each .072 S.W.G. diameter, .07 square inches total sectional area  
 Cargo light cables carrying 4 Amperes, comprised of 70 wires, each .007 S.W.G. diameter, .003 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Pure india rubber. Vulcanoid taped & lead covered.  
Protected by sheet iron where necessary.

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 None 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 No  
 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 and Armoured



**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 and Armoured

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

What special protection has been provided for the cables near boiler casings asbestos covered wire

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

How are cables carried through beams through lead bushes through bulkheads, &c. Watertight Glands

How are cables carried through decks through deck tubes

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 \_\_\_\_\_

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 \_\_\_\_\_

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.

Messrs. Wm Denny Bros. Ltd Electrical Engineers Date 30-12-21

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 160'

Distance between dynamo or electric motors and steering compass 160'

The nearest cables to the compasses are as follows:— Light fitted on compass.

A cable carrying	<u>3</u>	Amperes	<u>9</u>	feet from standard compass	<u>12</u>	feet from steering compass
A cable carrying	<u>2</u>	Amperes	<u>n</u>	feet from standard compass	<u>n</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 any course in the case of the standard compass and nil degrees on any course in the case of the steering compass.

**FOR WILLIAM DENNY & BROTHERS LIMITED.**

Builder's Signature. Date 18/3/22

**GENERAL REMARKS.**

This installation has been fitted on board under special survey tested under full working conditions found satisfactory

PKK - £31-4-0

It is submitted that this vessel is eligible for J. B. Rankin  
24-12-21 27-12-21 RECORDED Dec. Dept. Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW 28 MAR 1922

Elec. Light.



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN

HC.  
27-3-22  
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2m.11.10.—Transfer.