

WED. JUN. 14 1922

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 41983

Port of GLASGOW Date of First Survey 20. 3. '22 Date of Last Survey 26. 5. '22 No. of Visits 7  
 No. in on the Iron or Steel S.S. "SCHOLAR" Port belonging to LIVERPOOL  
 Reg. Book 30265 Built at GLASGOW By whom G. GONNELL & CO LTD When built 1922  
 Owners CHARENTE S.S. CO LTD Owners' Address T. J. HARRISON (MANAGERS)  
 Yard No. 394 Electric Light Installation fitted by MESRS CAMPBELL & SHERWOOD LTD When fitted 1922

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

TOTAL K.W. = 10

D. H. Allins Sons 4 Pole compound Dynamo Coupled direct to their Open Type Engine

Capacity of Dynamo 100 Amperes at 100 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed Engine Room Whether single or double wire system is used Single  
 Position of Main Switch Board having switches to groups of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each Engine Room 6  
Chart Room 7.

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

Are the fuses of non-oxidizable metal Yes. and constructed to fuse at an excess of 80 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 126 arranged in the following groups:—

A	<u>45</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>23</u>	Amperes
B	<u>30</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>15</u>	Amperes
C	<u>30</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>15</u>	Amperes
D		lights each of		candle power requiring a total current of		Amperes
E		lights each of		candle power requiring a total current of		Amperes
1	Mast head light with	1 lamps each of	<u>32</u>	candle power requiring a total current of	<u>1</u>	Amperes
2	Side light with	2 lamps each of	<u>32</u>	candle power requiring a total current of	<u>2</u>	Amperes
4	Cargo lights of	<u>5-16 CP. 2-100</u>		candle power, whether incandescent or arc lights	<u>both</u>	

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

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

## DESCRIPTION OF CABLES.

Main cable carrying 100 Amperes, comprised of 19 wires, each .083 S.W.G. diameter, .1 square inches total sectional area  
 Branch cables carrying 23 Amperes, comprised of 7 wires, each .044 S.W.G. diameter, .01 square inches total sectional area  
 Branch cables carrying 15 Amperes, comprised of 7 wires, each .029 S.W.G. diameter, .0045 square inches total sectional area  
 Leads to lamps carrying 15 Amperes, comprised of 7 wires, each .029 S.W.G. diameter, .0045 square inches total sectional area  
 Cargo light cables carrying Amperes, comprised of wires, each S.W.G. diameter, square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Lead covered Armoured Braided

Joints in cables, how made, insulated, and protected No joints.

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances 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 Steel tubes on Deck.



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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

L. b. a. & B. cable

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

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

Fibre Ferrules.

through bulkheads, &c.

Brass Glands.

How are cables carried through decks

Galv. Steel Pipe to 18" above Decks.

Are any cables run through coal bunkers no or cargo spaces no or spaces which may be used for carrying cargo, stores, or baggage no.

If so, how are they protected

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage

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

Coupling Boxes on Deck

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

direct to Beams.

How are the returns from the lamps connected to the hull

Between Brass Washers.

Are all the joints with the hull in accessible positions

Yes.

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 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.

Campbell & Isherwood La.

Electrical Engineers

Date

30<sup>th</sup> May 1922

COMPASSES.

Distance between dynamo or electric motors and standard compass

150 feet.

Distance between dynamo or electric motors and steering compass

150 feet.

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
10	10	7	
15	20	20.	

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

nil

degrees on

course in the case of the steering compass.

For CHARLES CONNELL & CO., Limited.

D. G. Vallon

SECRETARY.

Builder's Signature.

Date

1<sup>st</sup> June 1922

GENERAL REMARKS.

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

FAK - £10.0.0.

5/6/22

8/6/22.

It is submitted that this vessel is eligible for

RECORD.

Elec. Light.

J. S. Rankin

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW Elec. Light

13 JUN 1922



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