

WED. OCT. 20 1920

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 40157.

Port of Glasgow Date of First Survey 25/5/20 Date of Last Survey 25/6/20 No. of Visits 4  
 No. in on the Iron or Steel SS Poljana Port belonging to Chetiania  
 Reg. Book 810183 Built at Arrossan By whom Arrossan Shipbuilding Co when built 1920  
 Owners Messrs Winge & Co. Owners' Address \_\_\_\_\_  
 Yard No. 309 Electric Light Installation fitted by Telford Gair & Mackay When fitted 1920

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Enclosed forced lubrication engine direct coupled to compound wound dynamo  
 Capacity of Dynamo 120 Amperes at 100 Volts, whether continuous or alternating current Cont.  
 Where is Dynamo fixed Stbd Engine room Whether single or double wire system is used double  
 Position of Main Switch Board Stbd Engine room having switches to groups 6 of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each None

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 \_\_\_\_\_ 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 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 141 arranged in the following groups:—

A Cargo	30	lights each of	16	candle power requiring a total current of	15	Amperes
B Navigation	12	lights each of	various	candle power requiring a total current of	11	Amperes
C Engines	26	lights each of	16	candle power requiring a total current of	13	Amperes
D Accommodation	73	lights each of	30 watt	candle power requiring a total current of	22	Amperes
E		lights each of		candle power requiring a total current of		Amperes
	2	Mast head light with	2 lamps each of	32	candle power requiring a total current of	2
	2	Side light with	2 lamps each of	32	candle power requiring a total current of	2
	5	Cargo lights of	each 96	candle power, whether incandescent or arc lights	Head	

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	120	Amperes, comprised of	37	wires, each	14	S.W.G. diameter,	.182	square inches total sectional area
Branch cables carrying	22	Amperes, comprised of	7	wires, each	14	S.W.G. diameter,	.034	square inches total sectional area
Branch cables carrying	11	Amperes, comprised of	7	wires, each	18	S.W.G. diameter,	.012	square inches total sectional area
Leads to lamps carrying	2	Amperes, comprised of	1	wires, each	17	S.W.G. diameter,	.002	square inches total sectional area
Cargo light cables carrying	3	Amperes, comprised of	1	wires, each	14	S.W.G. diameter,	.005	square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Armoured & braided cable used in all spaces except cabins and bridge which are wired with lead covered cable. Cables are protected by iron pipes when liable to injury.

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 \_\_\_\_\_ 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 Through chow holes in beams & clipped to decks or casing with iron clips. Protected by sheet iron.

**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 casing and piping.

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

What special protection has been provided for the cables near boiler casings Steel armour & braiding

What special protection has been provided for the cables in engine room Steel armour & braiding

How are cables carried through beams Cham holes through bulkheads, &c. W. T. Glands

How are cables carried through decks W. T. Deck pipes

Are any cables run through coal bunkers No or cargo spaces yes or spaces which may be used for carrying cargo, stores, or baggage —

If so, how are they protected Steel armour & braiding also piping

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 Portable

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 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.

Yelford Green & Mackay Ltd. Electrical Engineers Date 21<sup>st</sup> Sept 1920

**COMPASSES.**

Distance between ~~dynamo~~ or electric motors and standard compass 25 feet

Distance between dynamo or electric motors and steering compass 20 feet

The nearest cables to the compasses are as follows:—

A cable carrying <u>3</u> Amperes	<u>12</u> feet from standard compass	<u>9</u> feet from steering compass
A cable carrying <u>5</u> Amperes	<u>2</u> feet from standard compass	<u>2</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.

L. Miller, Clerk. Builder's Signature. Date 7/10/20.

**GENERAL REMARKS.**

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

Elec. Lt. Bell J. Stanley Rankin.  
Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute GLASGOW 18 OCT 1920

Elec. Light. H



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

AC.  
18.10.20

Im. 11.13.—Transfer.