

## REPORT ON ELECTRIC LIGHTING INSTALLATION.

Received at London Office WED. JUN. 19. 1918

No. 17285

Port of Glasgow Date of First Survey 5<sup>th</sup> March, 1918 Date of Last Survey 18<sup>th</sup> April, 1918 No. of Visits 17  
 No. in Reg. Book of the Iron or Steel R.F.A. "PETRELLA" Port belonging to  
 Built at Port Glasgow By whom Dunlop, Bremner & Co. When built 1918  
 Owners Admiralty Owners' Address  
 Yard No. 314 Electric Light Installation fitted by Claud Hamilton Ltd Glasgow When fitted 1918

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

High speed steam engine direct coupled to compound wound ship lighting dynamo

Capacity of Dynamo 95 Amperes at 105 Volts, whether continuous or alternating current continuous  
 Where is Dynamo fixed Engine Room Whether single or double wire system is used double  
 Position of Main Switch Board Engine Room having switches to groups  
 Positions of auxiliary switch boards and numbers of switches on each

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 80 arranged in the following groups:—

arranged in the following groups :—							
A	16	lights each of	50	candle power requiring a total current of	28.8	Amperes	
B	26	lights each of	16	candle power requiring a total current of	15.6	Amperes	
C	24	lights each of	16	candle power requiring a total current of	14.4	Amperes	
D	14	lights each of	16	candle power requiring a total current of	8.4	Amperes	
E		lights each of		candle power requiring a total current of		Amperes	
1	Mast head light with	1	lamps each of	32	candle power requiring a total current of	1.2	Amperes
2	Side light with	1	lamps each of	32	candle power requiring a total current of	2.4	Amperes
2	Cargo lights of	8	50	candle power, whether incandescent or arc lights	incandescent		

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	95	Amperes, comprised of	19	wires, each	14	S.W.G. diameter, .093	square inches total sectional area
Branch cables carrying	28	Amperes, comprised of	19	wires, each	14	S.W.G. diameter, .045	square inches total sectional area
Branch cables carrying	15	Amperes, comprised of	19	wires, each	20	S.W.G. diameter, .018	square inches total sectional area
Leads to lamps carrying	2	Amperes, comprised of	1	wires, each	14	S.W.G. diameter, .0024	square inches total sectional area
Cargo light cables carrying	14	Amperes, comprised of	19	wires, each	22	S.W.G. diameter, .011	square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Insulated with pure and vulcanizing india rubber. Taped, the whole vulcanized together and lead covered.

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

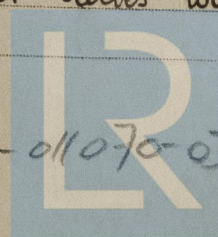
positions, none being made in bunkers, cargo spaces, or spaces which may at any time be used for carrying cargo, stores, or baggage

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 Tied to bulk heads and under decks with brass clip cables all lead covered.

all cables are to Admiralty requirements and have been passed by Admiralty inspectors.

011062-011070-0344



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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 Lead covers.

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

What special protection has been provided for the cables near boiler casings Lead covers.

What special protection has been provided for the cables in engine room Lead covers.

How are cables carried through beams Lead bushes. through bulkheads, &c. Deck Lutes to S. Glands

How are cables carried through decks Deck Lutes.

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 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 no.

Are any switches or fuses fitted in bunkers no.

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 Engine Room

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 Yes.

Are any switches, fuses, or joints of cables fitted in the pump room or companion No No (fitted outside companion)

How are the lamps specially protected in places liable to the accumulation of vapour or gas magazine fittings

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.

For CLAUDE HAMILTON LIMITED

Electrical Engineers

Date 25th May 18.

COMPASSES.

Distance between dynamo or electric motors and standard compass 40 feet

Distance between dynamo or electric motors and steering compass 48 feet

The nearest cables to the compasses are as follows:—

A cable carrying	28.	Ampères	12	feet from standard compass	16	feet from steering compass
A cable carrying	2	Ampères	3	feet from standard compass	5	feet from steering compass
A cable carrying		Ampères		feet from standard compass		feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power

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.

Geo. G. Parker

Builder's Signature.

Date 4th June 1918.

GENERAL REMARKS.

The materials & workmanship are good on completion the installation was tried under full load with satisfactory results. The work was carried out in accordance with the Admiralty specification.

It is submitted that this vessel is eligible for THE RECORD. Elec. Light.

W.D. 19/6/18.

Garbott

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

Committee's Minute

GLASGOW

18 JUN 1918

Elec. Light

ERI.-8NDV. 1918

Im. 11. — Transfer.

42 17.6.18

filled for oil fuel 4.18. T.P. above 150°



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