Rpt. 13.

Received at London Office WED. 23 JAN. 1918

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 17229.

Port of Greenock Date of First Survey 5th Sept, 1917, Date of Last Survey 17th Dec, 1917, No. of Visits 29.

No. in Reg. Book — on the Iron or Steel 172 "Prestol" Port belonging to

Built at Old Kilpatrick By whom Napier & Miller When built 1917

Owners The Admiralty Owners' Address

Yard No. 211 Electric Light Installation fitted by W.C. Martin & Co. Glasgow. When fitted 1917

DESCRIPTION OF DYNAMO, ENGINE, ETC.

2-26¼ Kw. Compound Wound Dynamos with equaliser lead for working in parallel, each direct coupled to a compound double acting steam engine.

Capacity of each Dynamo 250 ✓ Amperes at 105 ✓ Volts, whether continuous or alternating current continuous ✓

Where ~~are~~ Dynamos fixed starting platform in Engine Room Whether single or double wire system is used double ✓

Position of Main Switch Board beside Dynamos having switches to groups A,B,C,D,E & F. of lights, &c., as below

Positions of auxiliary ~~fuse~~ switch boards and numbers of ~~fuses~~ switches on each Forecastle 5way, Midships Stbd 1-5way & 1-8way, Midships Port 5way, Midships Stbd 1-8way & 2-6way, Accommodation Aft 8way, Chart Rm 1-4way 1-8way & 1-9way, Wireless Office 8way, Boiler Rm 5way, Engine Room 1-5way & 1-8way,

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 50 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 194 arranged in the following groups :—

A ____ lights each of ____ candle power requiring a total current of ____ Amperes

B ____ lights each of ____ candle power requiring a total current of ____ Amperes

C ____ lights each of ____ candle power requiring a total current of ____ 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

See Continuation Sheet

2 Mast head lights with 2 lamps each of 16 candle power requiring a total current of 1·12 Amperes

2 Side light with 1 lamps each of {32 / 16} candle power requiring a total current of 1·68 Amperes

2 Cargo lights of 400 candle power, whether incandescent or arc lights incandescent

If arc lights, what protection is provided against fire, sparks, &c. No arc lamps

Where are the switches controlling the masthead and side lights placed in Chart House

DESCRIPTION OF CABLES.

Main cable carrying 250 ✓ Amperes, comprised of 37 wires, each 13 S.W.G. diameter, ·250 square inches total sectional area

Branch cables carrying 63 Amperes, comprised of 19 wires, each 14 S.W.G. diameter, ·094 ✓ square inches total sectional area

Branch cables carrying 20 Amperes, comprised of 19 wires, each 17 S.W.G. diameter, ·046 ✓ square inches total sectional area

Leads to lamps carrying 3 Amperes, comprised of 1 wires, each 17 S.W.G. diameter, ·0025 ✓ square inches total sectional area

Cargo light cables carrying 13·5 Amperes, comprised of 19 wires, each 22 S.W.G. diameter, ·0115 ✓ square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Admiralty Pattern Lead Covered Cables

Joints in cables, how made, insulated, and protected None except on terminals in joint Boxes

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 Lead covered wire clipped to wood, steelwork or perforated sheet iron plates & in certain places (such as pump room) enclosed in steel 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 Lead Covering

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

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

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

How are cables carried through beams Lead Bushes through bulkheads, &c. W.T. Glands ✓

How are cables carried through decks Metal tubes fitted W.T. to deck and W.T. glands on top ✓

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

If so, how are they protected clipped to underside of deck protected by beams

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

If so, how are the lamp fittings and cable terminals specially protected Admiralty Pattern guarded Lamps

Where are the main switches and fuses for these lights fitted in accommodation with Local W.T. Switches

If in the spaces, how are they specially protected Admiralty Pattern W.T. Switches ✓

Are any switches or fuses fitted in bunkers No

Cargo light cables, whether portable or permanently fixed Portable How fixed Ad. Patt. Terminal Boxes

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. two, and with an amperemeter yes. two, fixed on 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 yes

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

How are the lamps specially protected in places liable to the accumulation of vapour or gas Ad. Patt. Magazine Fittings with Locks

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° Farhenheit 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.

U. G. Martin & Co. Electrical Engineers Date 11th January 1918.

COMPASSES.

Distance between dynamo or electric motors and standard compass 32 ft from Wireless Rotary

Distance between dynamo or electric motors and steering compass 28 ft from Wireless Rotary

The nearest cables to the compasses are as follows:—

A cable carrying	·56	Amperes	10	feet from standard compass	1	feet from steering compass
A cable carrying	·56	Amperes	1	feet from standard compass	10	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 a certain course in the case of the standard compass and Nil degrees on the same course in the case of the steering compass.

Napier & Miller Ltd. George Miller Director Builder's Signature. Date 17th Jany 1918.

GENERAL REMARKS.

The material and workmanship are good. Upon completion the installation was tested under full load with satisfactory results. The test has been carried out in accordance with the Admiralty Specification.

It is submitted that this vessel is eligible for THE RECORD. Elec. light. H.W.R. 22/1/18.

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

Committee's Minute GLASGOW. 22 JAN 1918 Elec. Light

Rpt. 9a.

Port of Continuation of Report No. 17229, dated 18th January, 1918, on the

11th Jan 1918

R.F.A. "Prestol."

Main Circuits

	Circuit	Miscellaneous	lights	candle power	Amps
A	Accommodation	1-12½" Fan	93	16	
		2-4½" Fans	1	8	57
		1 Radiator	11	16	
		1-16" Table Fan			
B	Yardarm Reflectors & Midships Fans	2-12½" Fans	16	50	60
C	Navigation	Cruiser Arc	15	16	
		Flashing Lamp	4	8	20
			1	32	
D	Wireless Officer & Rotary Converter	1 Circular			
		1 Rotary Converter	3	16	22
		1 Radiator			
E	Engine & Boiler Rooms	2-17½" Fans	50	16	63
F	20" Searchlight Projector				40
		Totals	194		292

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