

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 6110.

Port of **PLYMOUTH** Date of First Survey **5 July** Date of Last Survey **6 Sept 1921** No. of Visits **Two**
 No. in Reg. Book on the **Iron** Steel **Sc 50** James H Beazley Port belonging to **Liverpool**
 Built at **Dartmouth** By whom **Philip & Son Ltd** When built **1921-9**
 Owners **Mercy Docks & Harbour Board** Owners' Address **Liverpool**
 Yard No. **582** Electric Light Installation fitted by **Philip & Son Ltd, Dartmouth** When fitted **1921-9**

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Engine by **Clarke Chapman Co** Cylinder **6" dia 5" stroke** Flywheel governor
 Dynamo **5 K.W. 100 Volts. Multiple Compound wound**

Capacity of Dynamo **50** Amperes at **100** Volts, whether continuous or alternating current **Continuous**

Where is Dynamo fixed **Star Side of Engine Room** Whether single or double wire system is used **Double**

Position of Main Switch Board **Star Side of Eng Room near Dynamo** having switches to groups **Five** of lights, &c., as below

Positions of auxiliary ^{dist} switch boards and numbers of switches on each **One 4 way in lobby, after accommodation**
One 4 way in Engine Room, One 8 way on pantry bulkhead, one 4 way DP. in pilot's alleyway. One 10 way in Steering house

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 **25%** 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 **One hundred & ten** arranged in the following groups:—

A	Accommodation	17 lights each of	Total 245	candle power requiring a total current of	5	Amperes
B	Engine Room	15 lights each of	120	candle power requiring a total current of	2.4	Amperes
C	Forward	40 lights each of	608	candle power requiring a total current of	6	Amperes
D	Pilot's quarters	17 lights each of	272	candle power requiring a total current of	5.4	Amperes
E	Navigation	8 lights each of	176	candle power requiring a total current of	3.5	Amperes
	Two Mast head lights with one lamp each of	32	candle power requiring a total current of	1	Amperes	
	Two Side lights with one lamp each of	32	candle power requiring a total current of	1	Amperes	
	One Cargo lights of 8 lamps Total 64		candle power, whether incandescent or arc lights	1.28	Amperes	Surfaces

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

Where are the switches controlling the masthead and side lights placed **In steering house.**

DESCRIPTION OF CABLES.

Main cable carrying	60 Amperes, comprised of	19 wires, each	16 S.W.G. diameter,	.06 square inches total sectional area
Branch cables carrying	7 Amperes, comprised of	7 wires, each	20 S.W.G. diameter,	.007 square inches total sectional area
Branch cables carrying	4.28 Amperes, comprised of	7 wires, each	22 S.W.G. diameter,	.0042 square inches total sectional area
Leads to lamps carrying	3 Amperes, comprised of	3 wires, each	20 S.W.G. diameter,	.0029 square inches total sectional area
Cargo light cables carrying	7 Amperes, comprised of	7 wires, each	20 S.W.G. diameter,	.007 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

All lamp circuits in Engine Room V.I.R. Cable lead covered & armoured
 All auxiliary & lamp circuits throughout the Ship V.I.R. Cable lead covered
 Mast head and navigation circuits lead through iron piping
 Joints in cables, how made, insulated, and protected **There are no joints in cables.**
 On long circuits connecting boxes used are of iron with porcelain interiors and brass connections

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 **on battens underside of deck & inside of Casings, fastened with brass clips.**



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 None

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat None

What special protection has been provided for the cables near boiler casings None

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

How are cables carried through beams through bulkheads, &c.

How are cables carried through 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 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 W. T. Smith & Pegg

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 on switchboard and positive & negative cable lamp with fuse

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.

COMPASSES

J. G. Turner Secretary. Electrical Engineers Date Sept 29/1921

Distance between dynamo or electric motors and standard compass 58 feet

Distance between dynamo or electric motors and steering compass 53 ft

The nearest cables to the compasses are as follows:—

A cable carrying	<u>7</u>	Amperes	<u>4</u>	feet from standard compass	feet from steering compass
A cable carrying		Amperes		feet from standard compass	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 — course in the case of the standard compass and Nil degrees on — course in the case of the steering compass.

J. G. Turner Builder's Signature. Date Sept. 29/1921

GENERAL REMARKS.

This installation was carried out on board under survey in general conformity with the Rules and is in my opinion eligible in my opinion to be accepted as satisfactory

It is submitted that this vessel is eligible for

See Log

THE RECORD. Elec. Light.

Joselo Lary
Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. NOV. 1 1921

Elec Lt



© 2020

Lloyd's Register Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.