

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 5311

Port of Hong Kong Date of First Survey Mar. 30th. Date of Last Survey Apr. 26th. No. of Visits 5
 No. in Reg. Book on the ~~XXXX~~ Steel Screw Steamer "PLANORBIS" Port belonging to Hong Kong
 Built at Hong Kong By whom HongKong & Whampoa Dock Co. Ltd. When built 1922
 Owners Anglo-Saxon Petroleum Co. Ltd. Owners' Address London
 Card No. 582 Electric Light Installation fitted by HongKong & Whampoa Dock Co. Ltd. When fitted 1922

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One 12 K.W. Dynamo Direct coupled to a single cylinder engine 100 Volts,
 One 4½ K.W. Dynamo Direct coupled to a single cylinder engine 100 Volts.
 Capacity of Dynamo 120 & 45 Amperes at 100 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Middle platform of Engine Room Whether single or double wire system is used Double
 Position of Main Switch Board Middle platform of Eng. Rm. Having switches to groups 6 circuits, 154 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Chartroom, Navigation Lights. 5

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 30 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 Main Switchboard

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases Yes, Porcelain

Total number of lights provided for 154 arranged in the following groups:—

35 HA	32	lights each of	16	candle power requiring a total current of	16.5	Amperes
40 HB	12	lights each of	5-32; 7-16	candle power requiring a total current of	8.5	Amperes
42 HC	42	lights each of	16	candle power requiring a total current of	21	Amperes
D	52	lights each of	16	candle power requiring a total current of	26	Amperes
and E	16	lights each of	16	candle power requiring a total current of	8	Amperes
2	Mast head light with	1	lamps each of	32	candle power requiring a total current of	2
omm 2	Side light with	1	lamps each of	32	candle power requiring a total current of	2
6 lights				96		
22 bl-½ Watt	Cargo lights of		400	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 Chartroom

DESCRIPTION OF CABLES.

Main cable carrying	16.5 Amperes, comprised of	7 wires, each	16	S.W.G. diameter,	•0221	square inches total sectional area
Branch cables carrying	8.5 Amperes, comprised of	7 wires, each	20	S.W.G. diameter,	•007	square inches total sectional area
Branch cables carrying	21 Amperes, comprised of	19 wires, each	14	S.W.G. diameter,	•0937	square inches total sectional area
Leads to lamps carrying	2 Amperes, comprised of	1 wires, each	16	S.W.G. diameter,	•0032	square inches total sectional area
Cargo light cables carrying	3 Amperes, comprised of	113 wires, each	40	S.W.G. diameter,	•0030	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

All wires in protected places are insulated with vulcanised india rubber taped and lead covered. In unprotected places they have an additional galvanised iron armour. All main cables are in conduit.

4" Joints in cables, how made, insulated, and protected All joints are made in suitable junction boxes.

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 Vulcanised india rubber lead covered galvanised iron armoured wire led through conduit.



DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible On deck

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture Volcanised india rubber
lead covered and armoured.

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

What special protection has been provided for the cables near boiler casings Galvanised iron armour

What special protection has been provided for the cables in engine room Galvanised iron armour

How are cables carried through beams In lead bushes through bulkheads, &c. Brass glands

How are cables carried through decks In iron deck boxes with brass glands at ends.

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 -

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 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 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 -

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.

R. H. Dyer
Chief Engineer

Electrical Engineers

Date April 29th. 1922.

COMPASSES.

Distance between dynamo or electric motors and standard compass 192 feet

Distance between dynamo or electric motors and steering compass 195 feet

The nearest cables to the compasses are as follows:—

A cable carrying	Ampere	feet from standard compass	feet from steering compass
8.5	10	6	6
-	-	-	-
-	-	-	-

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 N11 degrees on - course in the case of the standard compass and N11 degrees on - course in the case of the steering compass.

R. H. Dyer
Builder's Signature

Builder's Signature

Date April 29th. 1922.

GENERAL REMARKS.

Vessel is fitted with a 1.5 K.W. wireless set. 7/16 S.W.G. cable supplying same.
Installation tested on April 26th. 1922 with good result.

L. Morrison
Surveyor to Lloyd's Register of Shipping

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Committee's Minute