

REPORT ON ELECTRIC LIGHTING INSTALLATION. No.

Port of **Hong Kong** Date of First Survey **11/10/23** Date of Last Survey **26/11/23** No. of Visits **7**
 No. in Reg. Book on the ~~Form~~ Steel **S. S. "YUEN SANG"** Port belonging to **London**
 Built at **Hong Kong** By whom **Hong Kong & Whampoa Dock Co.** When built **1923**
 Owners **Messrs The Indo-China S Nav. Co.** Owners' Address
 Yard No. **594** Electric Light Installation fitted by **Hong Kong & Whampoa Dock Co.** When fitted **1923**

DESCRIPTION OF DYNAMO, ENGINE, ETC.

-14 K.W. Multipolar dynamos direct coupled to a single cylinder engine running at 300 R.P.M.

Capacity of Dynamo **140** Amperes at **100** Volts, whether continuous or alternating current **Continuous**
 Where is Dynamo fixed **Starboard side of Engine Room** Whether single or double wire system is used **Double**
 Position of Main Switch Board **Starboard side of Eng. R.** having switches to groups **5** of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each **Chart room having 10-5 amp. switches for Navigation Lights etc.**

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 **60** 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, Main switch board**
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases **Yes, Porcelain.**

Total number of lights provided for **290** arranged in the following groups:—

A	38	lights each of	16	candle power requiring a total current of	12.6	Amperes
B	28	lights each of	16	candle power requiring a total current of	9.33	Amperes
C	82	lights each of	16	candle power requiring a total current of	27.33	Amperes
D	95	lights each of	16	candle power requiring a total current of	31.66	Amperes
E	35	lights each of	16	candle power requiring a total current of	11.66	Amperes
Two	Mast head light with	One lamps each of	32	candle power requiring a total current of	1.8	Amperes
Two	Side light with	One lamps each of	32	candle power requiring a total current of	1.8	Amperes
Six	Cargo lights of		400	candle power, whether incandescent or arc lights	$\frac{1}{2}$ watt type 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 **102** Amperes, comprised of **37** wires, each **.072"** S.W.G. diameter, **.1500** square inches total sectional area
 Branch cables carrying **9.33** Amperes, comprised of **7** wires, each **.044"** S.W.G. diameter, **.0100** square inches total sectional area
 Branch cables carrying **12.6** Amperes, comprised of **7** wires, each **.064"** S.W.G. diameter, **.0225** square inches total sectional area
 Branch cables carrying **11.66** Amperes, comprised of **7** wires, each **.044"** S.W.G. diameter, **.0100** square inches total sectional area
 " " " **27.33** Amperes, comprised of **19** wires, each **.052"** S.W.G. diameter, **.0400** square inches total sectional area
 Leads to lamps carrying **.66** Amperes, comprised of **1** wires, each **.064"** S.W.G. diameter, **.0030** square inches total sectional area
 Cargo light cables carrying **2** Amperes, comprised of **113** wires, each **.040** S.W.G. diameter, **.0030** square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

The ship is wired throughout with lead covered wire, and in unprotected places it is armoured with galvanised iron wire.

Joints in cables, how made, insulated, and protected **None, all made in junction 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 armoured wire.**



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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 covered & armoured

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

What special protection has been provided for the cables near boiler casings Lead covered and armoured

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

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

How are cables carried through decks In galvanised iron deck tubes.

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

If so, how are they protected Lead covered and armoured.

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 On main switch - board

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.

R.M. Dyer

Electrical Engineers

Date Dec. 1st. 1923.

COMPASSES.

Distance between dynamo or electric motors and standard compass 140'

Distance between dynamo or electric motors and steering compass 130'

The nearest cables to the compasses are as follows:—

A cable carrying <u>11.6</u> Amperes	<u>14'</u>	feet from standard compass	<u>7'</u>	feet from steering compass
A cable carrying <u>-</u> Amperes	<u>-</u>	feet from standard compass	<u>-</u>	feet from steering compass
A cable carrying <u>-</u> Amperes	<u>-</u>	feet from standard compass	<u>-</u>	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.

HONGKONG & WHAMPORA DOCK CO., LTD.

R.M. Dyer

Builder's Signature.

Date Dec. 1st. 1923.

GENERAL REMARKS.

1/2 K.W. Wireless set fitted.

Installation tested on November 26th. 1923. and found satisfactory.

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

JWD *15/2/24*

H. Morrison

Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI FEB 15 1924

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

2.11.120.—Transfer.

