

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 6225

Port of Hongkong Date of First Survey Nov. 17<sup>th</sup> 1927 Date of Last Survey Dec. 21<sup>st</sup> No. of Visits 6  
 No. in on the ~~Iron or Steel~~ M.S. PALAWAN Port belonging to Manila, P. I.  
 Reg. Book Built at Hongkong By whom HK + Whampoa Dock Co. Ltd When built 1927  
 Owners M. J. Ossorio Owners' Address Manila, P. I.  
 Yard No. 636 Electric Light Installation fitted by HK + Whampoa Dock Co. Ltd When fitted 1927

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

One 9.6 H.P. Dynamo direct connected to a 30 H.P. two cyl. "Benz" diesel engine  
 One 5 H.P. Dynamo direct connected to a 8 H.P. single cyl. "Gols" diesel engine

Capacity of Dynamos 1 - 84.5 Amperes at 115 Volts, whether continuous or alternating current continuous

Where is Dynamo fixed 1 - engine room, centre aft Whether single or double wire system is used double

Position of Main Switch Board Eng. room Bulkhead having switches to groups A. B + C. of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each One on For<sup>d</sup> E. Room bulkhead Star<sup>d</sup> side  
having one main switch + 4 branch switches.

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 90 arranged in the following groups:—

A	<u>23</u>	lights each of <u>200 16 c.p. 30 200</u>	candle power requiring a total current of <u>7</u>	Amperes
B	<u>33</u>	lights each of <u>16 + 32</u>	candle power requiring a total current of <u>7.75</u>	Amperes
C	<u>26</u>	lights each of <u>16 + 32</u>	candle power requiring a total current of <u>7.3</u>	Amperes
D	<u>1 motor</u>	lights each of <u>5 H.P.</u>	candle power requiring a total current of <u>33</u>	Amperes
E	<u>1 motor</u>	lights each of <u>5 H.P.</u>	candle power requiring a total current of <u>33</u>	Amperes
<u>2</u>	Mast head light with <u>1</u> lamp	each of <u>50</u>	candle power requiring a total current of <u>.5</u>	Amperes
<u>2</u>	Side light with <u>1</u> lamp	each of <u>50</u>	candle power requiring a total current of <u>.5</u>	Amperes
<u>4</u>	Cargo lights of <u>128</u>	candle power, whether incandescent or are lights <u>incandescent</u>		

If are lights, what protection is provided against fire, sparks, &c. None

Where are the switches controlling the masthead and side lights placed Wheel house

## DESCRIPTION OF CABLES.

Main cable carrying <u>43.5</u> Amperes, comprised of <u>19</u> wires, each <u>16</u> S.W.G. diameter, <u>.06</u> square inches total sectional area
Branch cables carrying <u>7.5</u> Amperes, comprised of <u>7</u> wires, each <u>18</u> S.W.G. diameter, <u>.01</u> square inches total sectional area
Branch cables carrying <u>32</u> Amperes, comprised of <u>7</u> wires, each <u>16</u> S.W.G. diameter, <u>.0225</u> square inches total sectional area
Leads to lamps carrying <u>.6</u> Amperes, comprised of <u>1</u> wires, each <u>16</u> S.W.G. diameter, <u>.003</u> square inches total sectional area
Cargo light cables carrying <u>1.6</u> Amperes, comprised of <u>125</u> wires, each <u>40</u> S.W.G. diameter, <u>.003</u> square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

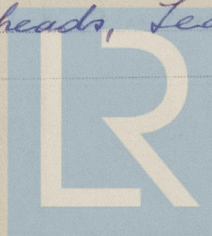
Cables insulated with one coat of pure rubber + two coats of vulcanized rubber, taped + lead covered. Cables in machinery + cargo spaces + in exposed places are lead covered + armoured.

Joints in cables, how made, insulated, and protected All joints made in 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 Clipped to decks + bulkheads, Lead covered and armoured.





**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 cable.*

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

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

What special protection has been provided for the cables in engine room *Lead covered + armoured.*

How are cables carried through beams *in lead bushes* through bulkheads, &c. *in W.T. glands.*

How are cables carried through decks *in Galv. iron deck tubes with glands.*

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

If so, how are they protected *Lead covered + armoured cable, protected by deck beams.*

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 switchboards*

**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.

*Neck*

Electrical Engineers

Date *Dec. 28<sup>th</sup> 1927.*

**COMPASSES.**

Distance between dynamo or electric motors and standard compass *33 ft*

Distance between dynamo or electric motors and steering compass *25 feet*

The nearest cables to the compasses are as follows:—

A cable carrying <i>.2</i>	Amperes <i>Compass Light</i>	feet from standard compass <i>Compass Light</i>	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.

*HONGKONG & WHARF DOCK Co., Ltd.*

*Neck*

Builder's Signature.

Date *Dec. 28<sup>th</sup> 1927.*

**GENERAL REMARKS.**

*2-5 H.P. motors in engine room driving pumps. No Wireless. Installation tested on Dec. 21<sup>st</sup> 1927 + found satisfactory.*

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

*W.D. Morrison*  
11/2/28 Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 10 FEB 1928



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.