

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 5927

Port of **Hong Kong** Date of First Survey **8th. May** Date of Last Survey **Sep. 29th. 25.** No. of Visits **7**  
 No. in Reg. Book on the ~~Iron~~ Steel **S. S. "CHANGTE"** Port belonging to **Hong Kong**  
 Built at **Hong Kong** By whom **Hongkong & Whampoa Dock Co. Ltd.** When built **1925**  
 Owners **G. S. Yuill & Co. Ltd.** Owners' Address **Sydney**  
 Yard No. **618** Electric Light Installation fitted by **Hongkong & Whampoa Dock Co. Ltd.** When fitted **1925**

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

**2 Sisson Crompton set compound wound dynamo single cylinder engine, 1 Petrol-Paraffin 5 K.W. set compound wound dynamo.**

Capacity of Dynamo **1 at 50** Amperes at **100** ✓ Volts, whether continuous or alternating current **Continuous** ✓  
**1 at 200**  
**1 at 400**  
 Where is Dynamo fixed **Engine Room Starboard** Whether single or double wire system is used **Double** ✓  
 Position of Main Switch Board **Engine Room Starboard** having switches to groups **6** of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each **None fitted**

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 **714** arranged in the following groups:—

A	{ 298	lights each of	20 Watt	candle power requiring a total current of	74.5	Amperes
B	{ 4 76	lights each of	300 "	" " " " " "	27.2	Amperes
C	{ 109	lights each of	20 "	candle power requiring a total current of	58.8	Amperes
D	{ 50	lights each of	20 "	candle power requiring a total current of	10.0	Amperes
E	{ 5 71	lights each of	100 "	" " " " " "	19.2	Amperes
F	{ 71 90	lights each of	20 "	candle power requiring a total current of	18.0	Amperes
2	Mast head light with	1 lamps each of	100 Watt	candle power requiring a total current of	1	Amperes
2	Side light with	1 lamps each of	100 Watt	candle power requiring a total current of	1	Amperes
4	Cargo lights of	300		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 **In Wheel House**

## DESCRIPTION OF CABLES.

Main cable carrying	400	Amperes, comprised of	61	wires, each	12	S.W.G. diameter,	.5	square inches total sectional area
Branch cables carrying	200	Amperes, comprised of	37	wires, each	13	S.W.G. diameter,	.25	square inches total sectional area
Branch cables carrying	60	Amperes, comprised of	19	wires, each	16	S.W.G. diameter,	.06	square inches total sectional area
Leads to lamps carrying	3	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	110	wires, each	36	S.W.G. diameter,	.0032	square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

**C.M.A. Cable 600 Megs. Insulating:—**

**Para rubber vulcanizing India rubber tape, lead sheathed and wire armoured.**

Joints in cables, how made, insulated, and protected **No joints**

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 —

How are the cables led through the ship, and how protected **Clipped on surface protected by sheet iron where necessary.**



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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 **Armoured and lead covered cable**

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat **Armoured & lead covered cable.**

What special protection has been provided for the cables near boiler casings **Armoured and lead covered cable.**

What special protection has been provided for the cables in engine room **Armoured and lead covered cable.**

How are cables carried through beams **Bushed with lead** through bulkheads, &c. **Watertight glands**

How are cables carried through decks **Iron pipes 20" above deck.**

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 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 **-**

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 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 **-**

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 **Nov. 12th. 1925.**

COMPASSES.

Distance between dynamo or electric motors and standard compass **10 feet**

Distance between dynamo or electric motors and steering compass **10 feet**

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	Light in compass	feet from standard compass	Light in compass	feet from steering compass
<b>3</b>					
-	-	-	-	-	-
-	-	-	-	-	-

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. M. Dyer*

Builder's Signature.

Date **November 12th. 1925.**

GENERAL REMARKS. **Installation tested on September 29th. 1925 and found satisfactory.**

**Wireless set fitted, requiring a total current of 15 amps.**

**90 electric radiators in cabins requiring a total current of 225 amps.**

**130 Fans in cabins requiring a total current of 65 amps.**

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

Elect. Light.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI. 18 DEC 1925**



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