機電工程署
EMSD

表格 WR2
香港特別行政區政府
電力條例(第 406 章)
電力(線路)規例
定期測試證明書

FORM WR2
THE GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION
ELECTRICITY ORDINANCE (CAP. 406)
ELECTRICITY (WIRING) REGULATIONS
PERIODIC TEST CERTIFICATE

此欄不用填寫
For Official use only
收件日期：
Receipt date: 27 NOV 2023
收據編號：
Receipt Number: W149149

(注意：填寫此申請表格前請參閱「表格 WR2 備註」。申請人應以正楷填寫此申請表格各欄，並應在表格上簽署。)
(Note: Before you complete this form, please read carefully the notes on "NOTES TO FORM WR2". The applicant should complete all sections of this application form in block letters and sign the form.)

致 機電工程署署長：
To the Director of Electrical & Mechanical Services,

3000248464E

第 1 部 Part 1

(1) **(請參閱備註 2 & 3 Please see notes 2 & 3)**

本人 _____，下方簽署人，為按電力條例 (第 406 章) 第 30 條所註冊的註冊電業工程人員，茲證明
本人已於 _____/_____/_____ (日 / 月 / 年) (請在空格內加 ✓號，只可選一空格)

I, Ma Kai Yuen, the undersigned, a registered electrical worker (REW) registered under Section 30 of the Electricity Ordinance (Cap. 406), hereby certify that I have on 18/11/2023 (D/M/Y) (Please tick in the appropriate box and only one box is allowed)

☑ 檢查及測試背頁第 3 部第 6 項載述的固定電力裝置。
inspected and tested the fixed electrical installation described in item 6 of Part 3 overleaf.

☐ 檢查及測試背頁第 3 部第 6 項載述的固定電力裝置的其中部分，並已收到由其他適當級別的註冊電業工程人員就個別部分所發的有效證明書 (表格 WR2(A))。
inspected and tested only part of the fixed electrical installation described in item 6 of Part 3 overleaf and have received valid certificates (FORM WR2(A)) certified by other REWs of appropriate grades, for other individual parts.

本人信納該固定電力裝置符合電力條例(第 406 章)及其附屬法例的規定。
I am satisfied that the fixed electrical installation complies with the Electricity Ordinance (Cap. 406) and its subsidiary legislations

簽署 Signature _____ 簽署日期 Date Signed 22/11/2023

(2) **(請參閱備註 4 Please see note 4)**

本人 _____，下方簽署人，茲代表_____，(請在空格內加 ✓ 號，只可選一空格)

I, Yeung Man Ho, Jason, the undersigned, on behalf of INTERLITE(ASIA) LTD _____, (Please tick in the appropriate box and only one box is allowed)

☑ 為按電力條例 (第 406 章) 第 33 條所註冊的註冊電業承辦商，
a registered electrical contractor (REC) registered under Section 33 of the Electricity Ordinance (Cap. 406),

☐ 為電力條例 (第 406 章) 第 35(3) 條所指的固定電力裝置擁有人，
the owner of the fixed electrical installation as stipulated in Section 35(3) of the Electricity Ordinance (Cap. 406)

現遵照電力條例 (第 406 章) 第 34(11) 條的規定，在本證明書上加簽。
endorse herewith in compliance with Section 34(11) of the Electricity Ordinance (Cap. 406).

簽署 Signature _____ 簽署日期 Date Signed 22/11/2023

INTERLITE (ASIA) LIMITED 3212 EM19T

第 2 部 Part 2

3) 茲證明由上述人士根據電力 (線路) 規例 (第 406 章，附屬法例) 第 20 條的規定對背頁第 3 部第 6 項載述的固定電力裝置所簽發的證明書，業已收悉及登記妥當。
I certify that the certificate issued under Regulation 20 of the Electricity (Wiring) Regulations (Cap. 406 sub. leg.) by the above persons for the fixed electrical installation described in item 6 of Part 3 overleaf was received and registered.

收據編號： Receipt No.: W149149
裝置編號： Installation No.: 0000039248-0002
登記日期： Date Registered: 18/12/2023
證明書屆滿日期： Date of Expiry: 21/11/2028

機電工程署署長
(程廣輝代行 K.F. CHING)
for Director of Electrical & Mechanical Services

* 請將不適用的刪去
Delete whichever is inapplicable

第 3 部 Part 3

(4) **註冊電業工程人員資料：**
Particulars of REW:

註冊電業工程人員姓名：
Name of REW: Ma Kai Yuen

聯絡電話：
Contact Tel. No.: 9660 8942

註冊編號：
REW Registration No.: W104053

級別：
Grade: C

准許工程：
Permitted Work: C0

屆滿日期：
Expiry Date: 17/04/2026

(5) **註冊電業承辦商資料：**
Particulars of REC:

註冊電業承辦商名稱：
Name of REC: INTERLITE(ASIA) LTD

圖文傳真號碼：
Fax No.:

聯絡電話：
Contact Tel. No.: 2608 1901

註冊編號：
REC Registration No.: 001822

屆滿日期：
Expiry Date: 18/05/2025

聯絡地址：
Correspondence Address: Flat J-L, 6 Floor, On Ho Industrial Building, 17-19 Shing Wan Road
Tai Wai, Shatin, N.T.

(6) **固定電力裝置資料：**
Particulars of the fixed electrical installation:

業務性質或固定電力裝置所在房產類別：
Business nature or type of premises where the fixed electrical installation is located: GOVERNMENT SCHOOL

固定電力裝置所在地址：
Address of the fixed electrical installation:

單位：
Flat:

樓層：
Floor:

樓宇名稱：
Name of the building: TSEUNG KWAN O GOVERNMENT PRIMARY SCHOOL

街號：
Street no.:

街道：
Street:

其他街號（如有）：
Other street no. (if any):

其他街道（如有）：
Other street (if any):

屋邨名稱：
Name of the estate: Hau Tak Estate

地區：
District: Tseung Kwan O

* 香港 / 九龍 / 新界
* HK / KLN / NT

固定電力裝置擁有人的姓名或機構名稱：
Name or organisation of the owner of the fixed electrical installation: Electrical and Mechanical Services Department

固定電力裝置擁有人或機構的聯絡地址（如與上項不同）：
Correspondence address of the owner of the fixed electrical installation (if different from the above):

聯絡電話：
Contact Tel. No.: 9088 0876

已成立業主立案法團：*〔是 / 否〕
Incorporated Owners Formed: * [Y / N]

以上房產有否安裝可再生能源發電設施? *〔是 / 否〕
Is there any renewable energy generating facility installed in the premises? * [Y / N]

如是，是次定期檢測有否包括該發電設施?：*〔包括(另附核對表) / 不包括^〕
If yes, is it included in this periodic test? * [Included (with checklist enclosed) / Not included^]
[^註: 倘若是次定期檢測不包括該發電設施，請確保該發電設施已包括在其他的定期測試證明書(表格 WR2)內。]
[^ Note: If it is not included in this periodic test, please ensure that it is covered by another periodic test certificate (Form WR2)]

定期測試公用固定電力裝置：*〔是 / 否〕
Periodical test for communal fixed electrical installation: * [Y / N]

固定電力裝置受檢查部分的說明，*〔全部 / 部份 電力裝置〕，另附圖則_____頁及簡要說明_____頁。
Description of the inspected part of the fixed electrical installation * [all / partial electrical installation] with _____ schematic diagram(s) and _____ description sheet(s).
PITC of LV Switchboard Only

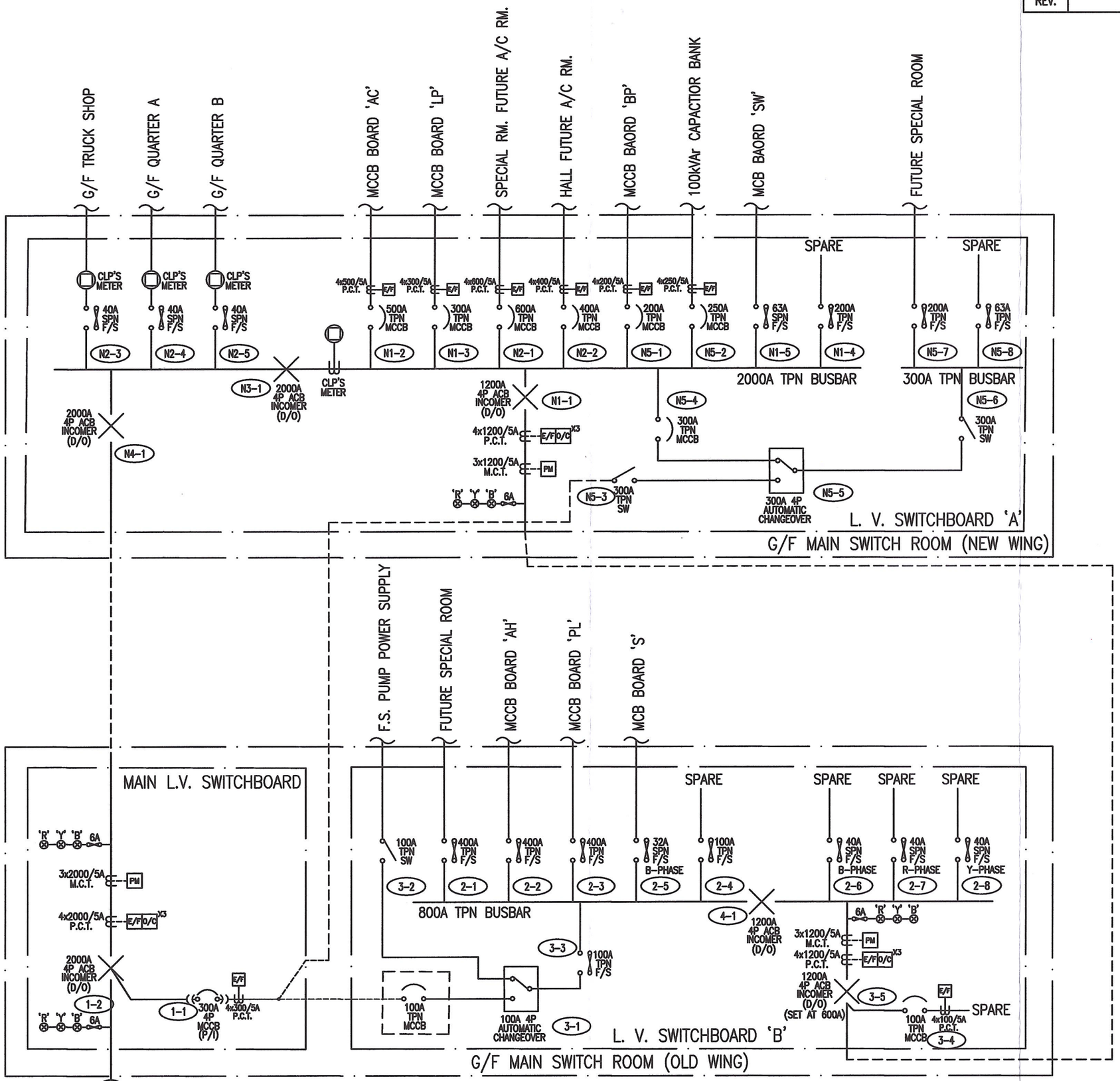
固定電力裝置受檢查部分的最大開關器件為_____安培_____伏特，*〔單相 / 三相〕。
Largest switching device of the inspected part of the fixed electrical installation: 2000 amperes 380 volts, * [single / three phase].

固定電力裝置的允許負載量為_____安培，*〔單相 / 三相〕。
Approved loading of the fixed electrical installation: 2000 amperes * [single / three phase].

此欄不用填寫 Official use only		
SRPT *[Y / N]	BT [ ]	RSUB [ ]

* 請將不適用的刪去
Delete whichever is inapplicable

REV.	DESCRIPTION	DATE	BY	CHK



LEGEND:	
	CLP kWh METER
	EARTHING SYSTEM
	AIR CIRCUIT BREAKER
	FUSE
	INDICATION LIGHT
PM	POWER METER
E/F	EARTH FAULT PROTECTION RELAY
O/C	OVER CURRENT PROTECTION RELAY
	SWITCH
	MOLDED CASE CIRCUIT BREAKER

PROJECT: *(EMSD CONTRACT NO. 3212EM19T) HAU TAK ESTATE, TSEUNG KWAN O, NEW TERRITORIES TSEUNG KWAN O GOV. PRI. SCHOOL*	TITLE: *SINGLE LINE DIAGRAM OF L.V. SWITCHBOARD*	SCALE: NIL	DRAWN BY: H. K. LAM
		DATE: 18/10/2023	CHECKED BY: KEVIN
		JOB No. SLJ-1895-K2A-063	DRG. No. SLJ-1895-K2A-063-SL REV.

No. 編號
2023-SK-174

KEY SAFE 貯匙箱 No. 編號
0138

CLP Power
中華電力

CLP 中 中電

LV SUPPLY ISOLATION CERTIFICATE
低壓電源隔離證

1. ISSUE AND DECLARATION 發出及聲明

To 致： LAI YIU HANG (Full name in block letter 姓名)

Registered Electrical Worker representative of customer
客戶註冊電業工程人員代表

I declare that the following **electrical equipment** has been **isolated** from all sources of supply from **CLP Power**. 茲聲明，下列**電力器具**已從所有**中華電力**的電源**隔離**。

149230 TKO GOVT PRI SCH L/Tx 用戶掣櫃（在變壓器隔離）

中電支站名稱： TKO GOVT PRI SCH 中電支站編號：149230

Full name and signature : 姓名及簽署： CHOY TAK KWONG

being a **authorised representative** of **CLP Power**
中華電力受權代表

Time 時間： 09:35 Date 日期： 12-8-23

2. RECEIPT 接受

I acknowledge receipt of this **LV Supply Isolation Certificate** and the associated **Key Safe key**. (key number:)
茲聲明，本人收到本**低壓電源隔離證**及其相關**貯匙箱鎖匙**。 (鎖匙編號:)

Signed: 簽署：

Being a Registered Electrical Worker representative of customer.
客戶註冊電業工程人員代表.

Time 時間： 09:36 Date 日期： 12-8-23

3. CLEARANCE 撤離

I certify that all persons under my charge have been withdrawn from, and also warned that the supply of the **electrical equipment** detailed in section 1 of this **LV Supply Isolation Certificate** will be restored.
茲證實，本人屬下全部人員已經從本**低壓電源隔離證**第 1 欄所詳列的**電力器具**撤離，並警告他們該**電力器具**將會恢復供電。

Full name and signature : 姓名及簽署： LAI YIU HANG

being a Registered Electrical Worker representative of customer.
客戶註冊電業工程人員代表.

Time 時間： 12:59 Date 日期： 12-8-23

4. CANCELLATION 註銷

I confirm that, this **LV Supply Isolation Certificate** and its copy are cancelled.
茲證實，註銷本**低壓電源隔離證**及其副本。

Full name and signature : 姓名及簽署： CHOY TAK KWONG

being a **authorised representative** of **CLP Power**
中華電力受權代表

Time 時間： 13:00 Date 日期： 12-8-23

→ A&BS → EDMS

SINOTECH E & M LIMITED

TEST CERTIFICATE

L.V. CUBICLE SWITCHBOARD

Project: P.I.T.C. of L.V. Switchboard for Tseung Kwan O Government Primary School

Location: Hau Tak Estate, Tsung Kwan O, N.T.

System Voltage: 380V 3 PHASE 4 WIRE 50Hz

This is to certify that the above switchboard has been Site Acceptance Tested satisfactory under the record of the following page 1 to page ____.

Test Engineer: Ma Kai Yuen

Date: 22 / Nov / 2023

Check by REW :

Registration No. : W104053

Expiry Date : 17 / Apr / 2026

NEW WING

1. Secondary Injection Test

Panel No. N1 ACB No. (N1-1) 1200A 4P

O/C No. 130100970041078

I.D.M.T. Units Characteristic - E/F No. 130286970213120

Phase Injection	Relay Settings		Injected Current (Amp.)	Operating Time (Sec.)	
	Plug Setting	Time Setting	Secondary	Normal	Actual
L1	5	1	10	3.21 ~ 4.34	3.42
L1	5	1	25	1.51 ~ 2.04	1.80
L1	5	1	50	1.11 ~ 1.50	1.29
L2	5	1	10	3.21 ~ 4.34	3.61
L2	5	1	25	1.51 ~ 2.04	1.83
L2	5	1	50	1.11 ~ 1.50	1.32
L3	5	1	10	3.21 ~ 4.34	3.56
L3	5	1	25	1.51 ~ 2.04	1.83
L3	5	1	50	1.11 ~ 1.50	1.30
E/F	1	1	2	3.21 ~ 4.34	3.59
E/F	1	1	5	1.51 ~ 2.04	1.76
E/F	1	1	10	1.11 ~ 1.50	1.28

C. The relays are being left at the following settings after tests :

		L1 - phase	**L2** - phase	**L3** - phase	**E/F**
I.D.M.T.	Plug Setting	5	5	5	0.5
	Time Multiplier	0.1	0.1	0.1	0.1

Operation of the relay result in correct operation of appropriated trip relay / trip coil OK

1. Secondary Injection Test

Panel No. N1 MCCB No. (N1-2) 500A TPN

E/F No. 130286970213098

I.D.M.T. Units Characteristic -

Phase Injection	Relay Settings		Injected Current (Amp.)	Operating Time (Sec.)	
	Plug Setting	Time Setting	Secondary	Normal	Actual
L1	5	1	10	3.21 ~ 4.34	---
L1	5	1	25	1.51 ~ 2.04	---
L1	5	1	50	1.11 ~ 1.50	---
L2	5	1	10	3.21 ~ 4.34	---
L2	5	1	25	1.51 ~ 2.04	---
L2	5	1	50	1.11 ~ 1.50	---
L3	5	1	10	3.21 ~ 4.34	---
L3	5	1	25	1.51 ~ 2.04	---
L3	5	1	50	1.11 ~ 1.50	---
E/F	1	1	2	3.21 ~ 4.34	3.25
E/F	1	1	5	1.51 ~ 2.04	1.77
E/F	1	1	10	1.11 ~ 1.50	1.26

C. The relays are being left at the following settings after tests :

		L1 - phase	**L2** - phase	**L3** - phase	**E/F**
I.D.M.T.	Plug Setting	---	---	---	0.5
	Time Multiplier	---	---	---	0.1

Operation of the relay result in correct operation of appropriated trip relay / trip coil OK

1. Secondary Injection Test

Panel No. N1 MCCB No. (N1-3) 300A TPN

E/F No. 130286970213096

I.D.M.T. Units Characteristic -

Phase Injection	Relay Settings		Injected Current (Amp.)	Operating Time (Sec.)	
	Plug Setting	Time Setting	Secondary	Normal	Actual
L1	5	1	10	3.21 ~ 4.34	---
L1	5	1	25	1.51 ~ 2.04	---
L1	5	1	50	1.11 ~ 1.50	---
L2	5	1	10	3.21 ~ 4.34	---
L2	5	1	25	1.51 ~ 2.04	---
L2	5	1	50	1.11 ~ 1.50	---
L3	5	1	10	3.21 ~ 4.34	---
L3	5	1	25	1.51 ~ 2.04	---
L3	5	1	50	1.11 ~ 1.50	---
E/F	1	1	2	3.21 ~ 4.34	3.40
E/F	1	1	5	1.51 ~ 2.04	1.75
E/F	1	1	10	1.11 ~ 1.50	1.28

C. The relays are being left at the following settings after tests :

		L1 - phase	**L2** - phase	**L3** - phase	**E/F**
I.D.M.T.	Plug Setting	---	---	---	0.5
	Time Multiplier	---	---	---	0.1

Operation of the relay result in correct operation of appropriated trip relay / trip coil OK

1. Secondary Injection Test

Panel No. N2 MCCB No. (N2-1) 600A TPN

E/F No. 130286970213097

I.D.M.T. Units Characteristic -

Phase Injection	Relay Settings		Injected Current (Amp.)	Operating Time (Sec.)	
	Plug Setting	Time Setting	Secondary	Normal	Actual
L1	5	1	10	3.21 ~ 4.34	---
L1	5	1	25	1.51 ~ 2.04	---
L1	5	1	50	1.11 ~ 1.50	---
L2	5	1	10	3.21 ~ 4.34	---
L2	5	1	25	1.51 ~ 2.04	---
L2	5	1	50	1.11 ~ 1.50	---
L3	5	1	10	3.21 ~ 4.34	---
L3	5	1	25	1.51 ~ 2.04	---
L3	5	1	50	1.11 ~ 1.50	---
E/F	1	1	2	3.21 ~ 4.34	3.86
E/F	1	1	5	1.51 ~ 2.04	1.77
E/F	1	1	10	1.11 ~ 1.50	1.32

C. The relays are being left at the following settings after tests :

		L1 - phase	**L2** - phase	**L3** - phase	**E/F**
I.D.M.T.	Plug Setting	---	---	---	0.5
	Time Multiplier	---	---	---	0.1

Operation of the relay result in correct operation of appropriated trip relay / trip coil OK

1. Secondary Injection Test

Panel No. N2 MCCB No. (N2-2) 400A TPN

E/F No. 130286970213081

I.D.M.T. Units Characteristic -

Phase Injection	Relay Settings		Injected Current (Amp.)	Operating Time (Sec.)	
	Plug Setting	Time Setting	Secondary	Normal	Actual
L1	5	1	10	3.21 ~ 4.34	---
L1	5	1	25	1.51 ~ 2.04	---
L1	5	1	50	1.11 ~ 1.50	---
L2	5	1	10	3.21 ~ 4.34	---
L2	5	1	25	1.51 ~ 2.04	---
L2	5	1	50	1.11 ~ 1.50	---
L3	5	1	10	3.21 ~ 4.34	---
L3	5	1	25	1.51 ~ 2.04	---
L3	5	1	50	1.11 ~ 1.50	---
E/F	1	1	2	3.21 ~ 4.34	3.37
E/F	1	1	5	1.51 ~ 2.04	1.78
E/F	1	1	10	1.11 ~ 1.50	1.26

C. The relays are being left at the following settings after tests :

		L1 - phase	**L2** - phase	**L3** - phase	**E/F**
I.D.M.T.	Plug Setting	---	---	---	0.5
	Time Multiplier	---	---	---	0.1

Operation of the relay result in correct operation of appropriated trip relay / trip coil OK

1. Secondary Injection Test

Panel No. N5 MCCB No. (N5-1) 200A TPN

E/F No. 130286970213095

I.D.M.T. Units Characteristic -

Phase Injection	Relay Settings		Injected Current (Amp.)	Operating Time (Sec.)	
	Plug Setting	Time Setting	Secondary	Normal	Actual
L1	5	1	10	3.21 ~ 4.34	---
L1	5	1	25	1.51 ~ 2.04	---
L1	5	1	50	1.11 ~ 1.50	---
L2	5	1	10	3.21 ~ 4.34	---
L2	5	1	25	1.51 ~ 2.04	---
L2	5	1	50	1.11 ~ 1.50	---
L3	5	1	10	3.21 ~ 4.34	---
L3	5	1	25	1.51 ~ 2.04	---
L3	5	1	50	1.11 ~ 1.50	---
E/F	1	1	2	3.21 ~ 4.34	3.27
E/F	1	1	5	1.51 ~ 2.04	1.73
E/F	1	1	10	1.11 ~ 1.50	1.27

C. The relays are being left at the following settings after tests :

		L1 - phase	**L2** - phase	**L3** - phase	**E/F**
I.D.M.T.	Plug Setting	---	---	---	0.5
	Time Multiplier	---	---	---	0.1

Operation of the relay result in correct operation of appropriated trip relay / trip coil OK

1. Secondary Injection Test

Panel No. N5 MCCB No. (N5-2) 250A TPN

E/F No. 130286970213099

I.D.M.T. Units Characteristic -

Phase Injection	Relay Settings		Injected Current (Amp.)	Operating Time (Sec.)	
	Plug Setting	Time Setting	Secondary	Normal	Actual
L1	5	1	10	3.21 ~ 4.34	---
L1	5	1	25	1.51 ~ 2.04	---
L1	5	1	50	1.11 ~ 1.50	---
L2	5	1	10	3.21 ~ 4.34	---
L2	5	1	25	1.51 ~ 2.04	---
L2	5	1	50	1.11 ~ 1.50	---
L3	5	1	10	3.21 ~ 4.34	---
L3	5	1	25	1.51 ~ 2.04	---
L3	5	1	50	1.11 ~ 1.50	---
E/F	1	1	2	3.21 ~ 4.34	3.34
E/F	1	1	5	1.51 ~ 2.04	1.74
E/F	1	1	10	1.11 ~ 1.50	1.26

C. The relays are being left at the following settings after tests :

		L1 - phase	**L2** - phase	**L3** - phase	**E/F**
I.D.M.T.	Plug Setting	---	---	---	0.5
	Time Multiplier	---	---	---	0.1

Operation of the relay result in correct operation of appropriated trip relay / trip coil OK

2. Insulation Resistance Record

	With all switching devices closed (M ohm)
L1 to earth	7
L2 to earth	6
L3 to earth	4
L1 to L2	5
L2 to L3	4
L3 to L1	6
L1 to N	7
L2 to N	6
L3 to N	4
E to N	0

3. Earth fault loop impedance 0.03 ohms

OLD WING

1. Secondary Injection Test

Panel No. 1 MCCB No. (1-1) 300A 4P

E/F No. 130286970213100

I.D.M.T. Units Characteristic -

Phase Injection	Relay Settings		Injected Current (Amp.)	Operating Time (Sec.)	
	Plug Setting	Time Setting	Secondary	Normal	Actual
L1	5	1	10	3.21 ~ 4.34	---
L1	5	1	25	1.51 ~ 2.04	---
L1	5	1	50	1.11 ~ 1.50	---
L2	5	1	10	3.21 ~ 4.34	---
L2	5	1	25	1.51 ~ 2.04	---
L2	5	1	50	1.11 ~ 1.50	---
L3	5	1	10	3.21 ~ 4.34	---
L3	5	1	25	1.51 ~ 2.04	---
L3	5	1	50	1.11 ~ 1.50	---
E/F	1	1	2	3.21 ~ 4.34	3.54
E/F	1	1	5	1.51 ~ 2.04	1.87
E/F	1	1	10	1.11 ~ 1.50	1.29

C. The relays are being left at the following settings after tests :

		L1 - phase	**L2** - phase	**L3** - phase	**E/F**
I.D.M.T.	Plug Setting	---	---	---	0.5
	Time Multiplier	---	---	---	0.1

Operation of the relay result in correct operation of appropriated trip relay / trip coil OK

1. Secondary Injection Test

Panel No. 1 ACB No. (1-2) 2000A 4P Incomer

O/C No. 130100990105037

I.D.M.T. Units Characteristic - E/F No. 130286970213092

Phase Injection	Relay Settings		Injected Current (Amp.)	Operating Time (Sec.)	
	Plug Setting	Time Setting	Secondary	Normal	Actual
L1	5	1	10	3.21 ~ 4.34	3.79
L1	5	1	25	1.51 ~ 2.04	1.76
L1	5	1	50	1.11 ~ 1.50	1.31
L2	5	1	10	3.21 ~ 4.34	3.76
L2	5	1	25	1.51 ~ 2.04	1.84
L2	5	1	50	1.11 ~ 1.50	1.32
L3	5	1	10	3.21 ~ 4.34	3.89
L3	5	1	25	1.51 ~ 2.04	1.76
L3	5	1	50	1.11 ~ 1.50	1.31
E/F	1	1	2	3.21 ~ 4.34	3.51
E/F	1	1	5	1.51 ~ 2.04	1.74
E/F	1	1	10	1.11 ~ 1.50	1.27

C. The relays are being left at the following settings after tests :

		L1 - phase	**L2** - phase	**L3** - phase	**E/F**
I.D.M.T.	Plug Setting	5	5	5	0.5
	Time Multiplier	0.1	0.1	0.1	0.1

Operation of the relay result in correct operation of appropriated trip relay / trip coil OK

1. Secondary Injection Test

Panel No. 3 MCCB No. (3-4) 100A 4P

E/F No. 9378608/39

I.D.M.T. Units Characteristic -

Phase Injection	Relay Settings		Injected Current (Amp.)	Operating Time (Sec.)	
	Plug Setting	Time Setting	Secondary	Normal	Actual
L1	5	1	10	3.21 ~ 4.34	---
L1	5	1	25	1.51 ~ 2.04	---
L1	5	1	50	1.11 ~ 1.50	---
L2	5	1	10	3.21 ~ 4.34	---
L2	5	1	25	1.51 ~ 2.04	---
L2	5	1	50	1.11 ~ 1.50	---
L3	5	1	10	3.21 ~ 4.34	---
L3	5	1	25	1.51 ~ 2.04	---
L3	5	1	50	1.11 ~ 1.50	---
E/F	1	1	2	3.21 ~ 4.34	3.84
E/F	1	1	5	1.51 ~ 2.04	1.76
E/F	1	1	10	1.11 ~ 1.50	1.31

C. The relays are being left at the following settings after tests :

		L1 - phase	**L2** - phase	**L3** - phase	**E/F**
I.D.M.T.	Plug Setting	---	---	---	1
	Time Multiplier	---	---	---	0.1

Operation of the relay result in correct operation of appropriated trip relay / trip coil OK

1. Secondary Injection Test

Panel No. 3 ACB No. (3-5) 1200A 4P

O/C No. 9384102/25

I.D.M.T. Units Characteristic - E/F No. 9378608/59

Phase Injection	Relay Settings		Injected Current (Amp.)	Operating Time (Sec.)	
	Plug Setting	Time Setting	Secondary	Normal	Actual
L1	5	1	10	3.21 ~ 4.34	3.90
L1	5	1	25	1.51 ~ 2.04	1.80
L1	5	1	50	1.11 ~ 1.50	1.29
L2	5	1	10	3.21 ~ 4.34	3.84
L2	5	1	25	1.51 ~ 2.04	1.81
L2	5	1	50	1.11 ~ 1.50	1.33
L3	5	1	10	3.21 ~ 4.34	3.87
L3	5	1	25	1.51 ~ 2.04	1.65
L3	5	1	50	1.11 ~ 1.50	1.31
E/F	1	1	2	3.21 ~ 4.34	3.78
E/F	1	1	5	1.51 ~ 2.04	1.76
E/F	1	1	10	1.11 ~ 1.50	1.30

C. The relays are being left at the following settings after tests :

		L1 - phase	**L2** - phase	**L3** - phase	**E/F**
I.D.M.T.	Plug Setting	1	1	1	1
	Time Multiplier	0.1	0.1	0.1	0.1

Operation of the relay result in correct operation of appropriated trip relay / trip coil OK

2. Insulation Resistance Record

	With all switching devices closed (M ohm)
L1 to earth	3
L2 to earth	5
L3 to earth	6
L1 to L2	5
L2 to L3	4
L3 to L1	4
L1 to N	3
L2 to N	5
L3 to N	6
E to N	0

3. Earth fault loop impedance 0.02 ohms

4. Capacitance of the Capacitor Bank (4x 25kVar)

Mico Farad			
STEP	L1 - L2	L1 - L3	L2 - L3
1	259	257	259
2	255	255	256
3	256	255	255
4	257	256	257

Function Test for ACB

Item	Description	Satisfactory (√) Unsatisfactory (X) NOT completed (NC) NOT applicable (NA)
1.	The ACB ratings are in accordance with the approved working drawings.	√
2.	Arc chutes are provided.	√
3.	Shutters have been provided at the junction of busbar/ACB connection.	√
4.	Mechanical closing mechanism.	√
5.	Electrical closing mechanism.	NA
6.	Mechanical tripping operation.	√
7.	Overcurrent trip operation.	√
8.	Earth leakage trip operation	√
9.	Operation of castell key interlock	NA
10	Mechanical ON/OFF indicator.	√
11.	Operation of auxiliary switches.	√

Function Test for MCCB

Item	Description	Satisfactory (√) Unsatisfactory (X) NOT completed (NC) NOT applicable (NA)
1.	Mechanical closing mechanism.	√
2.	Electrical closing mechanism.	NA
3.	Mechanical tripping operation.	√
4.	Earth Leakage trip operation	√
5.	Mechanical ON/OFF indicator.	√

Function Test for Changeover

Item	Description	Satisfactory (√) Unsatisfactory (X) NOT completed (NC) NOT applicable (NA)
1.	Indication Light and Control Wiring properly indentified & connect.	√
2.	Operation of auxiliary switches	√
3.	Electrical operation.	√

Function Test for Capacitor Bank

Item	Description	Satisfactory (√) Unsatisfactory (X) NOT completed (NC) NOT applicable (NA)
1.	The Capacitor Bank rating are in accordance with the approved working drawings.	√
2.	Manual operation is good.	√
3.	Door lock function check.	√
4.	Visual inspection.	√
5.	Vacuum cleaning.	√
6.	Capacitor value.	√

Visual Checks

Item	Description	Satisfactory (√) Unsatisfactory (X) NOT completed (NC) NOT applicable (NA)
1.	Vacuum cleaning of L.V. Switch	√
2.	Vacuum cleaning of capacitor bank	√

Appendix 13

B) Checklists

(Note: For the use of the following five checklists, please refer to Code 22)

Checklist No. 1—Items For New LV Installation or Items For Periodic Testing of LV Installations

Installation Address: Hau Tak Estate, Tsung Kwan O, N.T.
-Tseung Kwan O Government Primary School

Tested by/Date

(N/A if not applicable)

(a) Switchboards, Circuit Breakers and Main Switches

(i)	No visible damage to impair safety.	Ma Kai Yuen / 2023/11/18
(ii)	Safe access provided.	Ma Kai Yuen / 2023/11/18
(iii)	Every circuit breaker, main switch and fuse holder(s) provided with up-to-date, legible and durable rating labels giving their ratings.	Ma Kai Yuen / 2023/11/18
(iv)	Every circuit breaker and main switch provided with a legible and durable identification label.	Ma Kai Yuen / 2023/11/18
(v)	An up-to-date schematic diagram displayed to show the main distribution system.	Ma Kai Yuen / 2023/11/18
(vi)	Link of adequate size installed in neutral circuit.	Ma Kai Yuen / 2023/11/18
(vii)	All accessible live parts screened with insulating plate or earthed metal.	Ma Kai Yuen / 2023/11/18

Tested by/Date
(N/A if not applicable)

(viii) The overload and fault current protection characteristics of all circuit breakers verified with secondary injection test instruments where appropriate. Ma Kai Yuen / 2023/11/18

(ix) Lowest insulation resistance being 3 Mohms (not less than 1 Mohm) measured between phases/neutral/ earth. Ma Kai Yuen / 2023/11/18

(x) All exposed conductive parts effectively earthed with a maximum earth fault loop impedance being 0.03 ohms. Ma Kai Yuen / 2023/11/18

(The following item(s) under this section shall be included for low voltage installations which was connected to supply after 1st Jun 1992)

(xi) An up-to-date notice of periodic inspection and testing provided at point of supply (i.e. a switchboard, a circuit breaker or a distribution board) of the installation in compliance with Code 17D. Ma Kai Yuen / 2023/11/18

Tested by/Date
(N/A if not applicable)

(b) Substations

(The following item(s) under this section shall be included for low voltage installations which was connected to supply after 1st Jun 1992)

(i) A warning notice 'DANGER SUBSTATION, UNAUTHORISED ENTRY PROHIBITED' and '危險——電力分站，未經授權不得內進' provided at every entrance of substations in compliance with Code 17A(1). N/A

(ii) Suitable locking facilities provided for HV substations in compliance with Code 4F(1)(c). N/A

(iii) Suitable lighting provided in compliance with Code 4F(3)(a). N/A

(iv) Suitable ventilation provided in compliance with Code 4F(3)(a). N/A

(v) Entrance/exit free of obstruction in compliance with Code 4F(2)(c). N/A

(c) Switchrooms

(The following item(s) under this section shall be included for low voltage installations which was connected to supply after 1st Jun 1992)

(i) A warning notice 'DANGER —— ELECTRICITY, UNAUTHORISED ENTRY PROHIBITED' and '危險——有電，未經授權不得內進' provided at every entrance of switchrooms in compliance with Code 17A(2). Ma Kai Yuen / 2023/11/18

		Tested by/Date (N/A if not applicable)
(ii)	Suitable locking facilities provided for HV Switchrooms in compliance with Code 4F(1)(c).	N/A
(iii)	Suitable lighting provided in compliance with Code 4F(3)(a).	Ma Kai Yuen / 2023/11/18
(iv)	Suitable ventilation provided in compliance with Code 4F(3)(a).	Ma Kai Yuen / 2023/11/18
(v)	Entrance/exit free of obstruction in compliance with Code 4F(2)(c).	Ma Kai Yuen / 2023/11/18

(d) Busbar Trunking System including Rising Mains

(i)	No visible damage to impair safety.	N/A
(ii)	Phase identification marked on both ends of main cable/ conductor, and at terminations.	N/A
(iii)	All joints of metal conduit or trunking to be mechanically sound, electrically continuous and protected against corrosion.	N/A
(iv)	All accessible live parts screened with an insulating plate or earthed metal.	N/A
(v)	Lowest insulation resistance being _____Mohms (not less than 1 Mohm) measured between phases/neutral/ earth.	N/A
(vi)	All metal conduit or trunking effectively earthed with a maximum earth fault loop impedance being _____ohms.	N/A

		Tested by/Date (N/A if not applicable)
(e) Meter Board/Box		
(i)	No visible damage to impair safety.	Ma Kai Yuen / 2023/11/18
(ii)	Safe access provided.	Ma Kai Yuen / 2023/11/18
(iii)	All exposed metal parts effectively earthed with a maximum earth fault loop impedance being 0.03 ohms.	Ma Kai Yuen / 2023/11/18
(f) Overhead Lines		
(i)	No visible damage to impair safety.	N/A
(ii)	A minimum height of ____metres from ground (not less than 5.8 metres for lines acrossing any place accessible to vehicular traffic, 5.2 metres in other places or not less than the tallest height restriction of _____metres).	N/A
(iii)	Lowest insulation resistance being _____ Mohms (not less than 1 Mohm) measured between phases/ neutral/earth.	N/A
(iv)	All metal work associated with every steel pole effectively earthed.	N/A
(g) Main Cables		
(i)	No visible damage to impair safety.	Ma Kai Yuen / 2023/11/18
(ii)	Cables protected against mechanical damage.	Ma Kai Yuen / 2023/11/18

		Tested by/Date (N/A if not applicable)
(iii)	Correct phase identification provided at both ends of the cable.	Ma Kai Yuen / 2023/11/18
(iv)	Lowest insulation resistance being 3 Mohms (not less than 1 Mohm) measured between cores and cores to earth.	Ma Kai Yuen / 2023/11/18
(v)	All exposed metal parts including the cable armour effectively earthed with a maximum earth fault loop impedance being 0.03 ohms.	Ma Kai Yuen / 2023/11/18

(h) Distribution Board

(i)	No visible damage to impair safety.	N/A
(ii)	No fuse installed in the neutral circuit.	N/A
(iii)	All live parts screened with an insulating plate or earthed metal.	N/A
(iv)	Phase identification provided on the distribution board.	N/A
(v)	Insulation resistance of not less than 1 Mohm measured between phases/ neutral/ earth.	N/A
(vi)	All exposed metal parts effectively earthed.	N/A

Tested by/Date
(N/A if not applicable)

(The following item(s) under this section shall be included for low voltage installations which was connected to supply after 1st Jun 1992)

(vii) A warning notice 'DANGER' and '危險' provided on the front panel of every distribution board in compliance with Code 17A(3). N/A

(viii) A notice of periodic testing provided at or near the main distribution board incorporating a residual current device (RCD) in compliance with Code 17E. N/A

(i) Final Circuits

(i) No visible damage to impair safety. N/A

(ii) All non-armoured cables susceptible to damage protected with steel conduit/trunking. Bushing and rubber grommet, where necessary, provided. N/A

(iii) Conductor sized to suit the rating of the fuse/MCB protecting the circuit. N/A

(iv) No cable joint in final circuit. N/A

(v) All joints of metal conduits or trunking to be mechanically sound, electrically continuous and protected against corrosion. N/A

(vi) For temporary installation, cables lying on the ground or attached to scaffoldings secured on suitable supports. N/A

		Tested by/Date (N/A if not applicable)
(vii)	Insulation resistance of not less than 1 Mohm measured between phases/ neutral/earth.	N/A
(viii)	All metal conduits, trunking, switch boxes and exposed metal parts effectively earthed.	N/A
(ix)	Residual current devices function properly.	N/A
(x)	Earth fault loop impedance and polarities of every outlet checked.	N/A
(j) Motors		
(i)	No visible damage to impair safety.	N/A
(ii)	Insulation resistance of not less than 1 Mohm measured between phases/ neutral/earth.	N/A
(iii)	All exposed conductive parts effectively earthed.	N/A
(k) Earthing		
(i)	No visible damage to impair safety.	Ma Kai Yuen / 2023/11/18
(ii)	All exposed conductive parts of the wiring installation connected to the earthing terminal with appropriate protective conductor.	Ma Kai Yuen / 2023/11/18
(iii)	Bonding/earthing connection to water pipe/ ~~gas pipe~~/duct effectively connected.	Ma Kai Yuen / 2023/11/18

		Tested by/Date (N/A if not applicable)
(The following item(s) under this section shall be included for low voltage installations which was connected to supply after 1st Jan 1985)		
(iv)	A warning notice 'SAFETY *EARTH/ ELECTRICAL CONNECT DO NOT REMOVE' and '安全接地終端 —— 切勿移去' provided at all main earthing terminal and main bonding connections.	Ma Kai Yuen / 2023/11/18
(v)	Main equipotential bonding conductors effectively connected to main water pipes, main gas pipes, other services pipes/ducting and exposed metallic parts of structural framework.	Ma Kai Yuen / 2023/11/18
(vi)	Supplementary equipotential bonding effectively provided between exposed conductive parts and extraneous conductive parts.	Ma Kai Yuen / 2023/11/18
(vii)	Exposed conductive parts of fixed equipment installed outside equipotential zone effectively earthed for the required disconnection.	Ma Kai Yuen / 2023/11/18
(viii)	Exposed conductive parts of fixed equipment installed within equipotential zone effectively earthed for the required disconnection.	Ma Kai Yuen / 2023/11/18
(ix)	Effectiveness of the main equipotential bonding connection to the main earthing terminal.	Ma Kai Yuen / 2023/11/18

		Tested by/Date (N/A if not applicable)
(x)	Effectiveness of the main equipotential bonding connection to the lighting protection system.	Ma Kai Yuen / 2023/11/18

(l) Neon Sign

(i)	No visible damage to impair safety.	N/A
(ii)	The fireman's switch clearly labelled.	N/A
(iii)	All high voltage equipment enclosed in an earthed metal box fitted with a 'DANGER' and '危險' warning notice.	N/A
(iv)	All live parts screened with an insulation plate or earthed metal.	N/A
(v)	High voltage cables securely supported with glass or glazed porcelain.	N/A
(vi)	Insulation resistance of the LV circuit being ____Mohms (not less than 1 Mohm) between phases/ neutral/earth.	N/A

		Tested by/Date (N/A if not applicable)
(vii)	All exposed metalwork permanently and effectively bonded and earthed with a maximum earth fault loop impedance of _____ohms measured at LV side.	N/A

*Delete whichever is inapplicable

Remarks: REC and REW are required to ensure their responsible fixed electrical installation is able to comply with the relevant requirements of this Code of Practice, rather than the items as listed in the checklists only.