

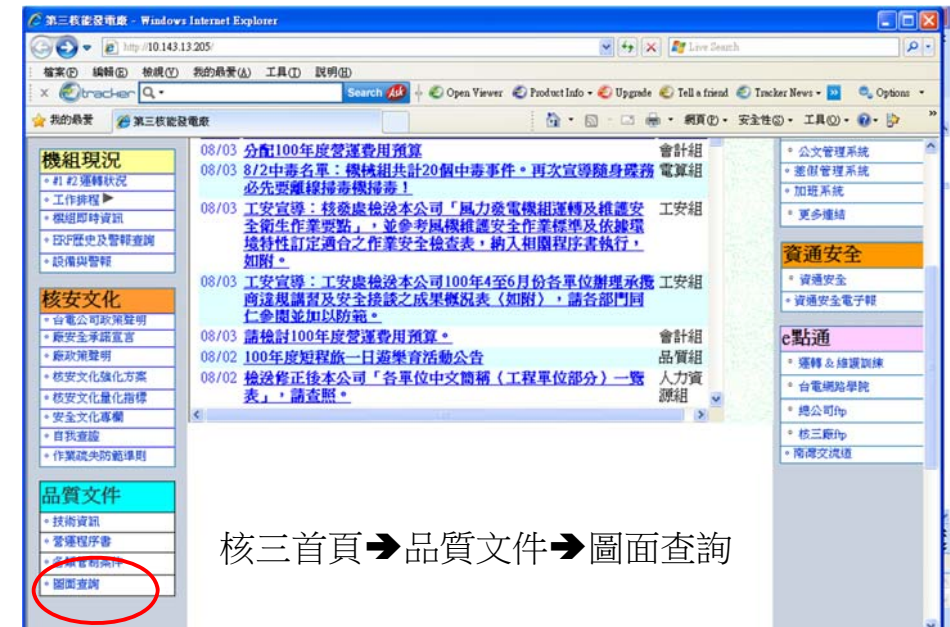
CLD圖說

Control Logic Diagram

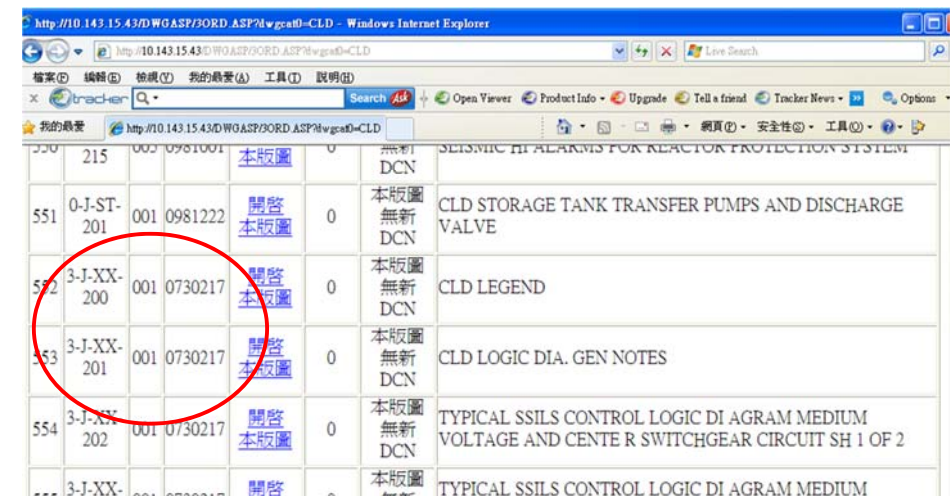
J-XX-200.001.tif

J-XX-201.001.tif

CLD



CLD



CLD

GENERAL ABBREVIATIONS

SSILS - SOLID STATE INTERPOSING LOGIC SYSTEM.
 ESFAS - ENGINEERED SAFETY FEATURES ACTUATION SYSTEM.
 MCC - MOTOR CONTROL CENTER.
 L.C. - LOAD CENTER.
 SOL VAL - SOLENOID VALVE.

P&ID

Control Logic Diagram



- Manual Input (瞬間)

Momentary handswitch
input to logic

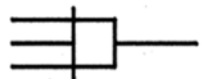


- Manual Input (保持)

Maintained handswitch
input to logic

CLD

Control Logic Diagram



- AND
Output exists only when **all inputs are present**



- OR
Output exists only when **one or more inputs are present**

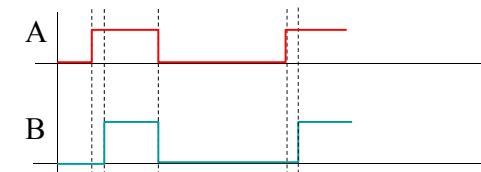
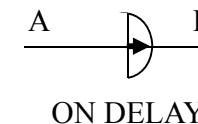


- NOT
Output exists only when **input is not present**

Control Logic Diagram



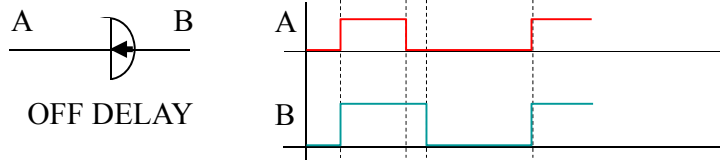
- ON DELAY
Output exists only when input **has been continuously present for a preset time and remains present**
信號出現，超過預設時間才有輸出



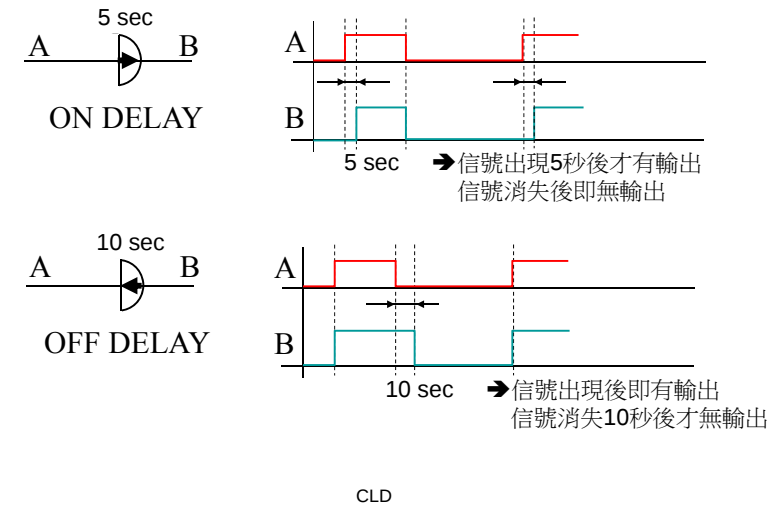
Control Logic Diagram



- **OFF DELAY**
Output exists only when input is **present and for a preset time after the input is not present**
信號消失，超過預設時間後才無輸出

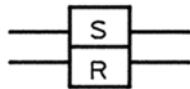


ON DELAY & OFF DELAY

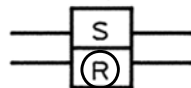


Control Logic Diagram

- **MEMORY**



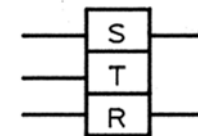
- **Set output** exists when set input is present and continues until the reset input is present.
- **Reset output** exists only when set output is not present.
- **A circle around S or R** indicates the output that exists when both set and reset inputs are present.



Control Logic Diagram

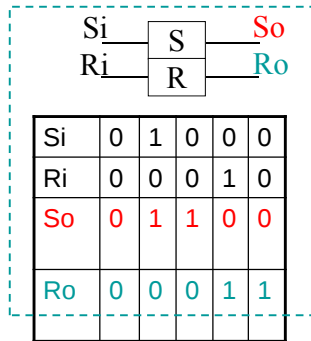
- **TOGGLE MEMORY**

(開關)

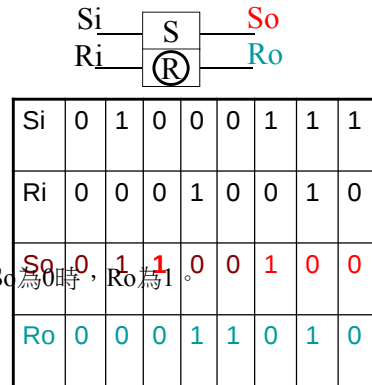


- **Output** change each time toggle input is present.
- Set and reset operate the same as for the memory symbol.
- The toggle input is not effective when set or reset inputs are present.

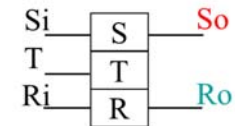
Set & Reset



註：只在So為0時，Ro為1。



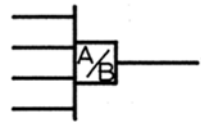
註：只在So為0時，Ro為1。



Si	0	1	0	0	0	1	1	1			
Ri	0	0	0	1	0	0	1	0			
T											
So	0	1	1	0	0	1	0	0			
Ro	0	0	0	1	1	0	1	0			

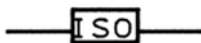
P&ID

Control Logic Diagram



- COINCIDENCE MATRIX

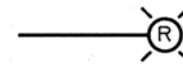
Output exists only when at least A out of B inputs are present.



- ISOLATION

Output is electrically isolated from input.

Control Logic Diagram



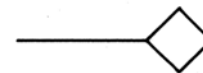
- LIGHT

Red – Operating, Flowing, or Increasing.

Green – Not operating, Not flowing, or Decreasing.

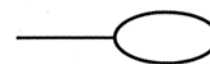
Amber – Manual or Synchronize.

White – Trouble or Disable.



- ANNUNCIATOR

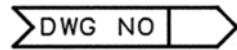
Input to annunciator.



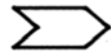
- COMPUTER

Input to computer.

Control Logic Diagram



- CONTINUATION
Logic continuation on **another drawing**.



- CONTINUATION
Logic continuation on **the same drawing**.

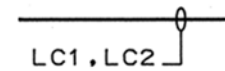
Control Logic Diagram



- SSILS SCOPE
Boundary of the Solid State Interposing Logic System. 固態邏輯界面控制系統

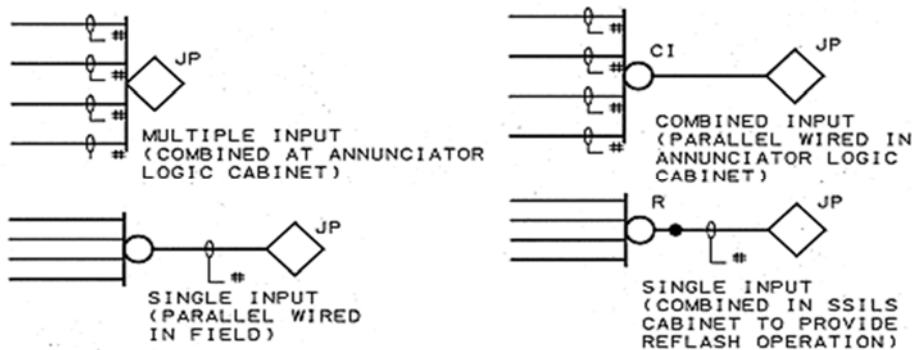


- FUNCTIONAL CIRCUIT SCOPE
Separation between different functional circuits.



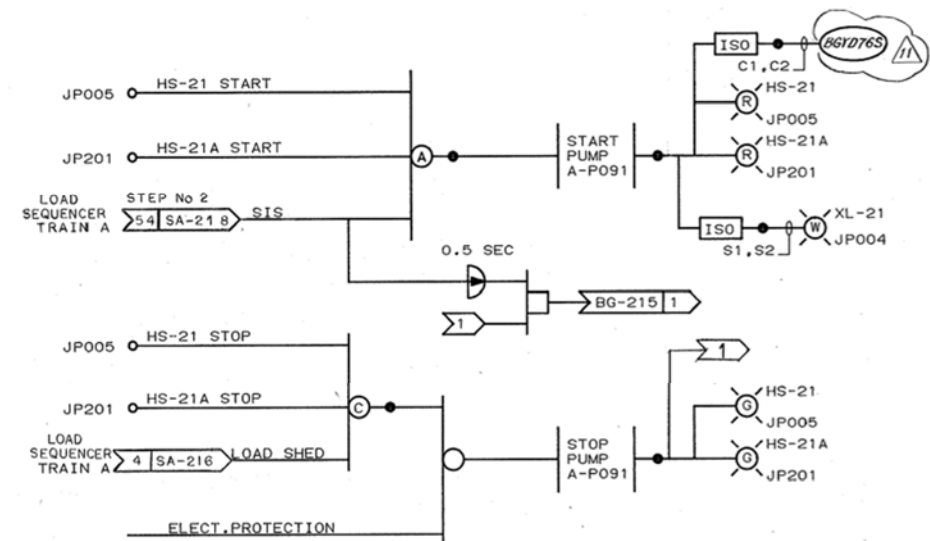
- WIRE NUMBERS
Field wire numbers for SSILS circuits.

Control Logic Diagram



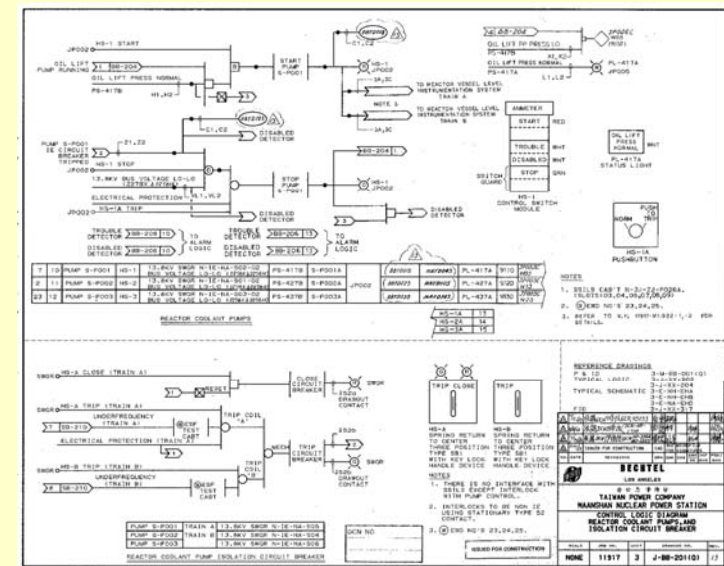
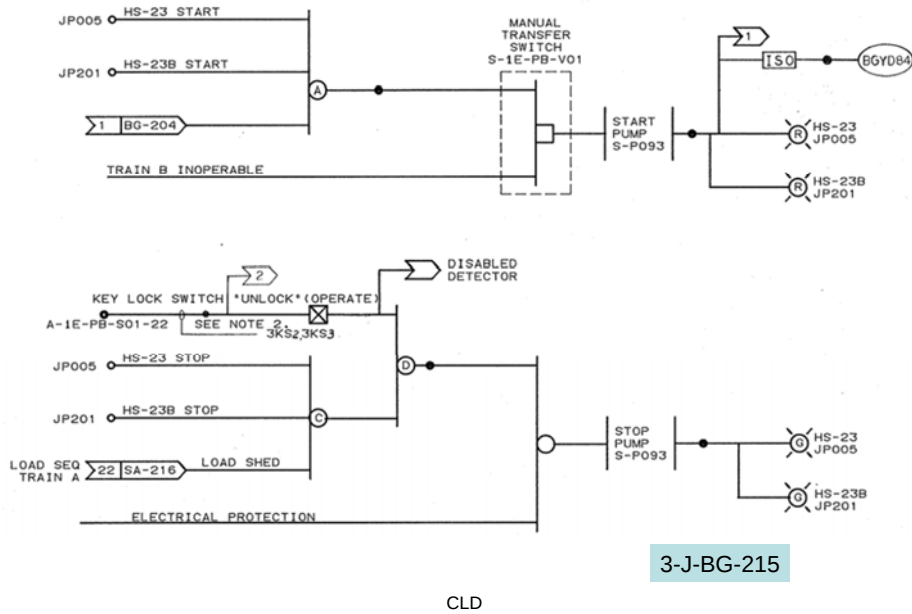
GENERAL ABBREVIATIONS

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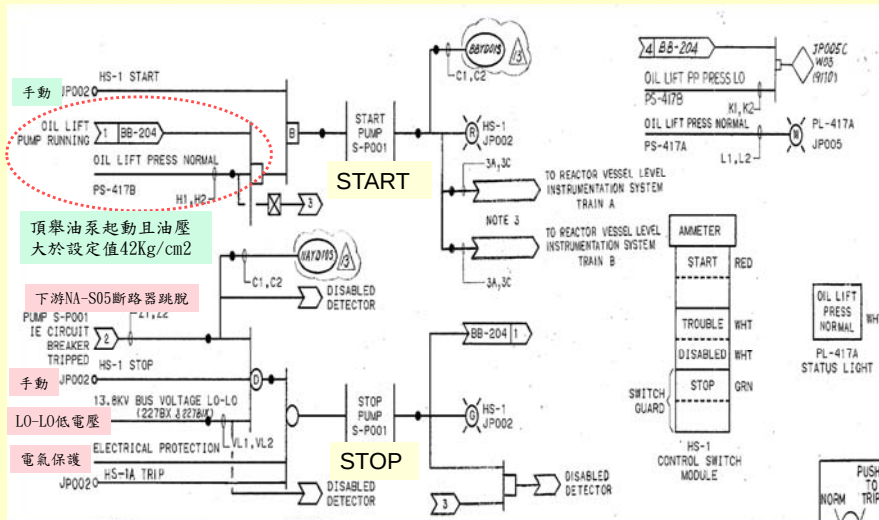


3-J-BG-204

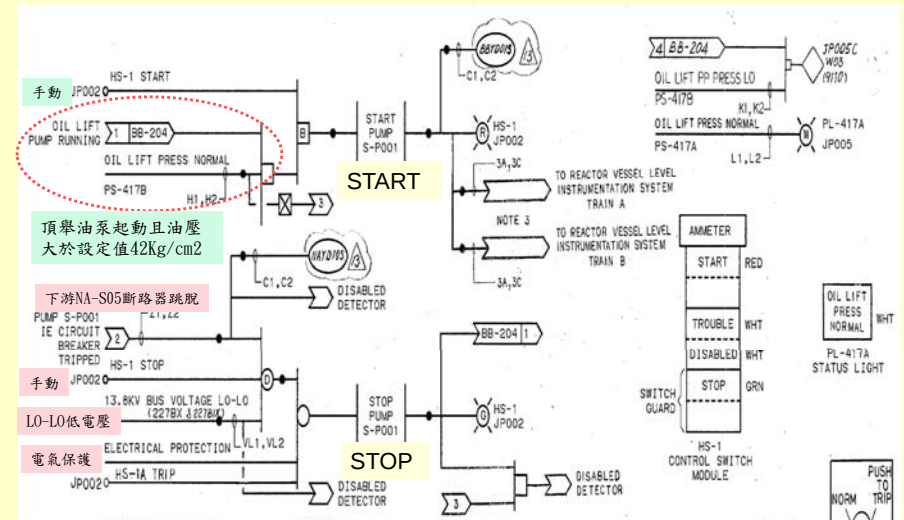
CLD



RCP起動及停止邏輯圖



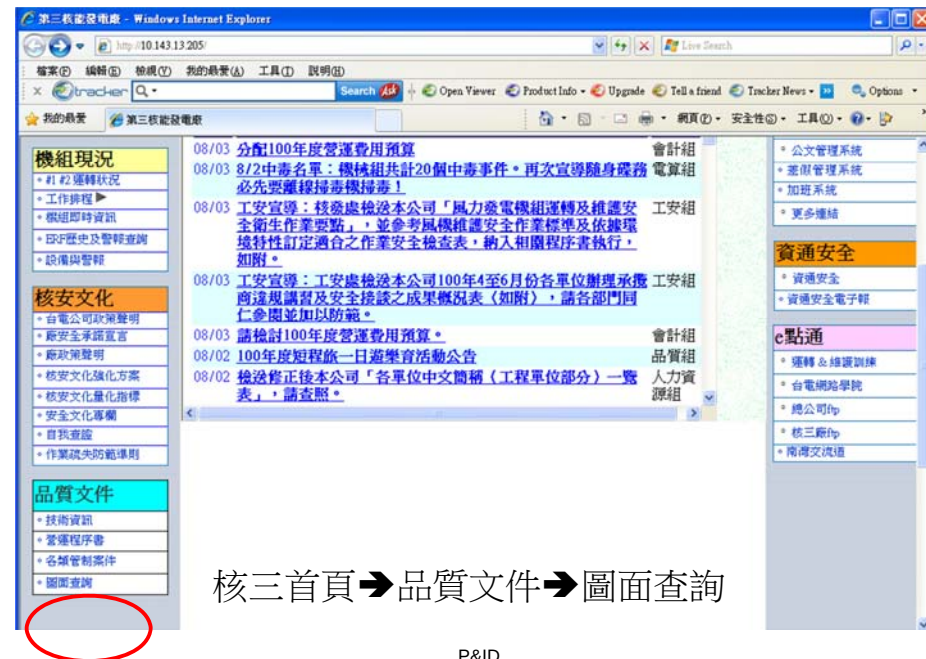
RCP起動及停止邏輯圖



CWD

Control Wiring Diagram 控制接線圖

CWD



P&ID



CWD





CWD 圖目錄

*注意：DCN數量為0時，本版圖連結之圖檔即為最新版；DCN數量不為0時，本版圖外另有發行DCN，請連結DCN清單及圖檔，以查得最新發行之DCN。

序號	圖號	版次	發行日	不含DCN之圖檔	DCN數量	DCN清單及圖檔	名稱
1	3-CWD-AB-001	005	0781013	開啓本版圖	0	本版面無新DCN	MAIN STEAM TO AXU. FW PUMP TURBINE WARM - UP VALVE AIJABHY210
2	3-CWD-AB-002	007	0940810	開啓本版圖	0	本版面無新DCN	MAIN STEAM TO AXU. FW PUMP TURBINE VALVE AIJABHV211
3	3-CWD-AB-003	006	0781013	開啓本版圖	0	本版面無新DCN	MAIN STEAM TO AUX.FW PUMP TURBINE WARM - UP VALVE BIJABHV310

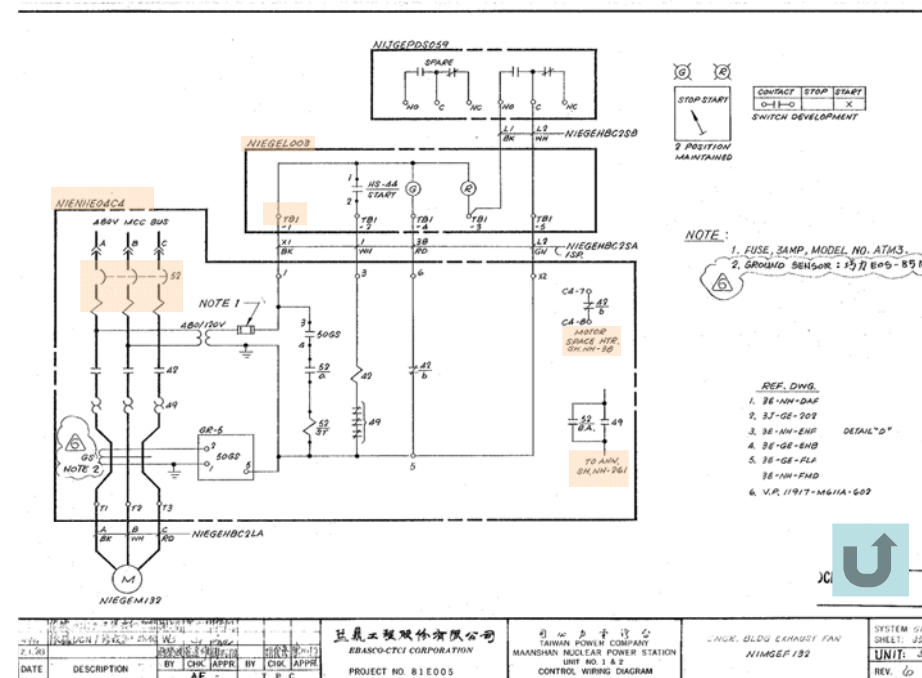
CWD - Control Wiring Diagram

控制接線圖

- 設備相關儀電元件之整體接線配置流程圖，不含卡片細部。
- 單一設備可能包含於多張CWD圖中。
- 系統設備：依系統區分(AB~SQ)
 - 一般設備：編號小於300，如：CWD-AB-052.010.TIF。
 - 警報：編號3xx，如：CWD-AB-302.005.TIF
 - 儀器：編號4xx，如：CWD-AB-401.007.TIF
- LGD：BKR、SSILS...(011~048)，如：CWD-LGD.011.TIF



3936	0-CWD-LF-040	001	0970220	開啓本版圖	0	本版面無新DCN	ELECTRICAL MANHOLE PUMPS NOMLFP-LM01.PMA03.SSPS1.LM69-3A
3937	3-CWD-LGD-011	000	0710330	開啓本版圖	0	本版面無新DCN	SCHEMATIC DIAGRAM NON - CLASS 1E 13.8KV SWGR BKR INTERNAL MECHANISM
3938	CWD-LGD-011A	001	0970509	開啓本版圖	0	本版面無新DCN	GE VCB VL-13.8-750-1200A SCHEMATIC DIA NON-CLASS 1E 13.8 KV SWGR BRKR INTERNAL MECHANISM
3964	3-CWD-LGD-047	000	0710408	開啓本版圖	0	本版面無新DCN	CTL SWITCH MODULE SCHEMATIC 07
3965	3-CWD-LGD-048	001	0880105	開啓本版圖	0	本版面無新DCN	GOULD GROUND FAULT RELAY CAT NO 202D6141UL
3966	3-CWD-MA-001	010	1000430	開啓本版圖	0	本版面無新DCN	GENERATOR MAIN UNIT AUX. XFMR AC PROTECTION SH.1 OF 8



控制電路各部份元件介紹

- (1) 電源：480V、三相、60Hz
- (2) 斷路器：ACB，電源ON/OFF控制用
- (3) 控制用變壓器：變壓比480/120V，供給控制迴路電源
- (4) 42主接點：三組a接點，用來控制風扇馬達起停運轉。

CWD



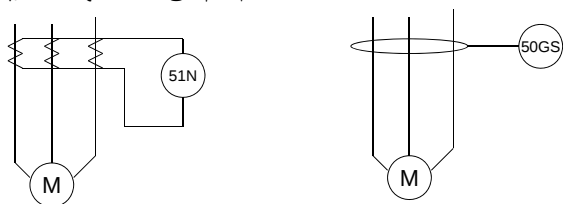
- (5) 49電驛之感熱元件 (Heater Element)：
設於馬達電流迴路上，馬達電流愈大，熱就產生越多，將使得49電驛內之雙金屬片彎曲越厲害，進而頂開49電驛之接點，將控制迴路電源切除，保護MOV馬達不致因過載燒毀。
(49電驛為電氣過載保護元件)

CWD



(6) 50GS :馬達的接地故障保護

- 馬達起動電流大，尤其是像在本廠這種全壓起動的系統，各比流器的飽和程度不同，電驛迴路中會有殘餘的零相電流，所以如果用51N電驛容易誤動作。
- 在低電阻接地的系統，可以使用零相比流器加瞬間跳脫，就不必顧慮各比流器飽和程度不同的問題，這種方法簡單可靠、快速，而且很經濟，因此本廠的馬達保護大量使用這種方式，此電驛叫50GS



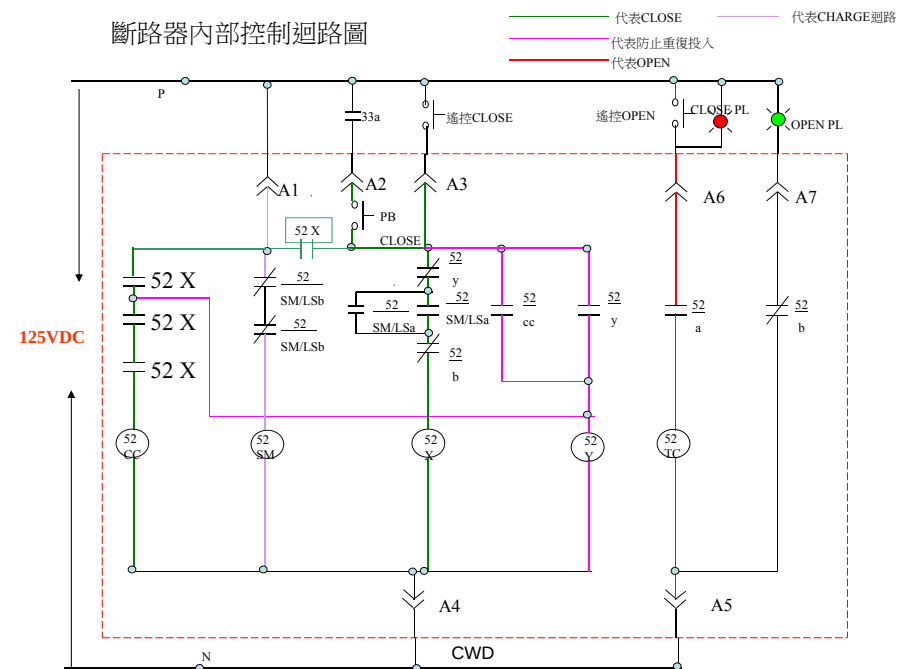
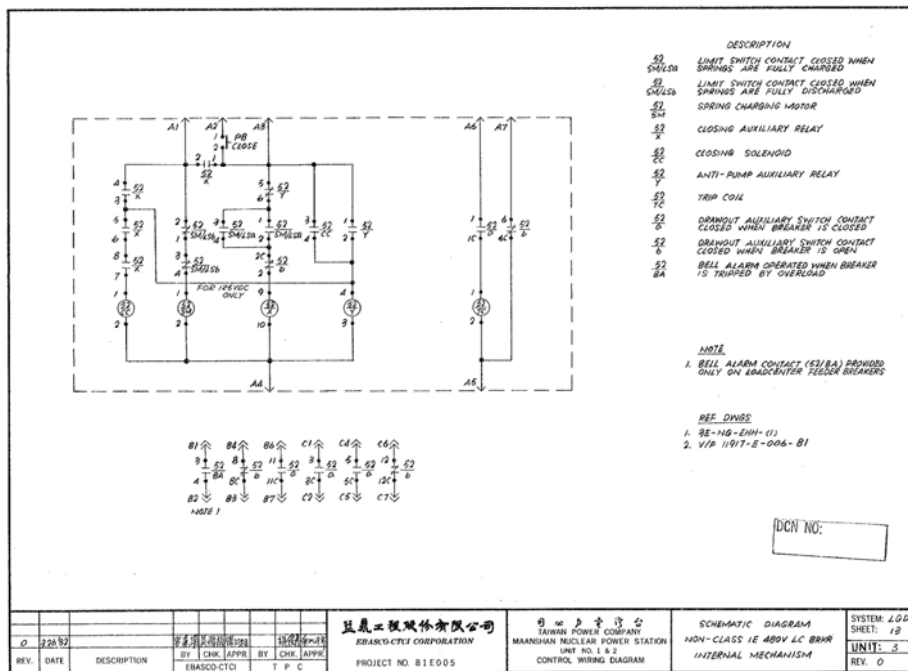
CWD



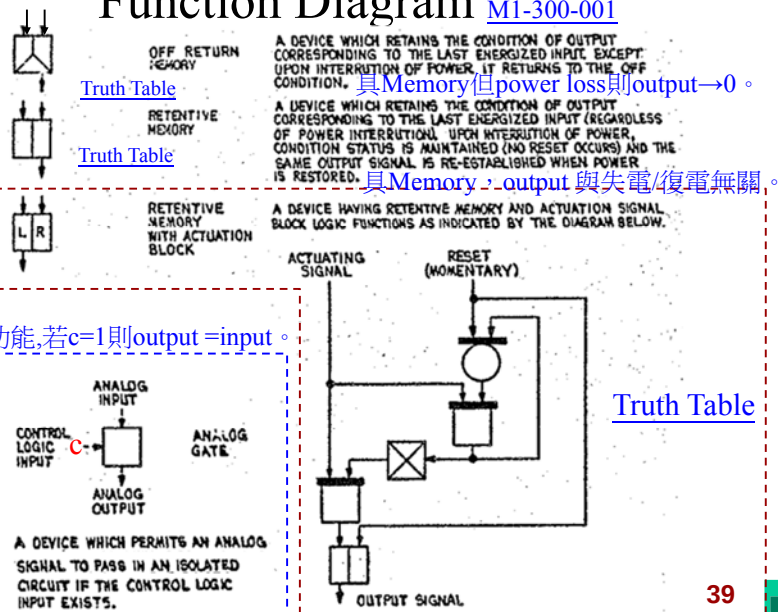
- (7) 熔絲：控制迴路限流保護用。
(一般為接地保護)
- (8) 42：控制風扇起停運轉之「電磁接觸器」
(Magnetic Contacts, MC)。包括「線圈」(Coil) 及數組「a、b接點」。當「線圈」未通電時，「a接點」不接通，但「b接點」閉合；反之，當「線圈」通電時，「a接點」閉合，而「b接點」不接通。『註：「線圈」通電的動作稱為「激磁」(Energized)，「a接點」稱為「常開接點」(Normal Open Contact)，「b接點」稱為「常閉接點」(Normal Close Contact)。』

CWD

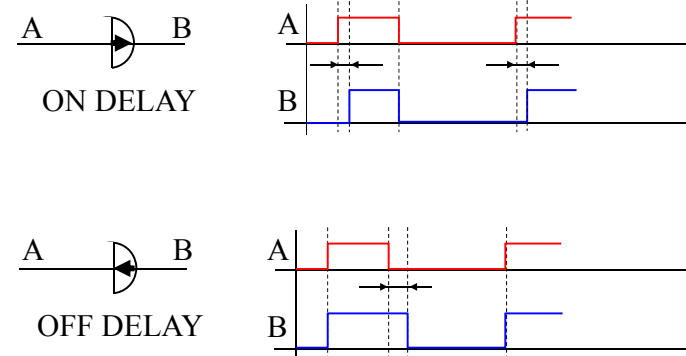




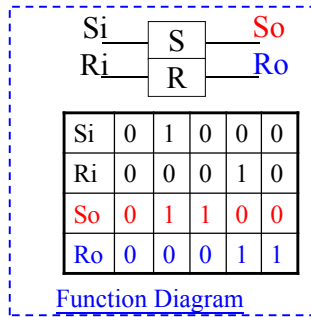
Function Diagram M1-300-001



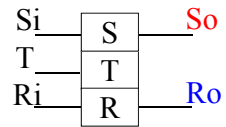
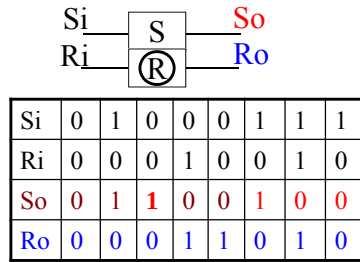
ON DELAY與OFF DELAY



Set & Reset



註：只在So為0時，Ro為1。



Si	0	1	0	0	0	1	1	1			
Ri	0	0	0	1	0	0	1	0			
T											
So	0	1	1	0	0	1	0	0			
Ro	0	0	0	1	1	0	1	0			

註：只在So為0時，Ro為1。

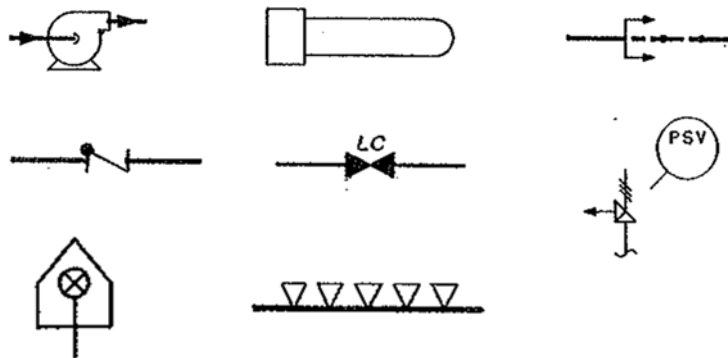
41



P&ID

自我評量

- 請說明下列圖例



自我評量

- 請說明下列邏輯符號的名稱

