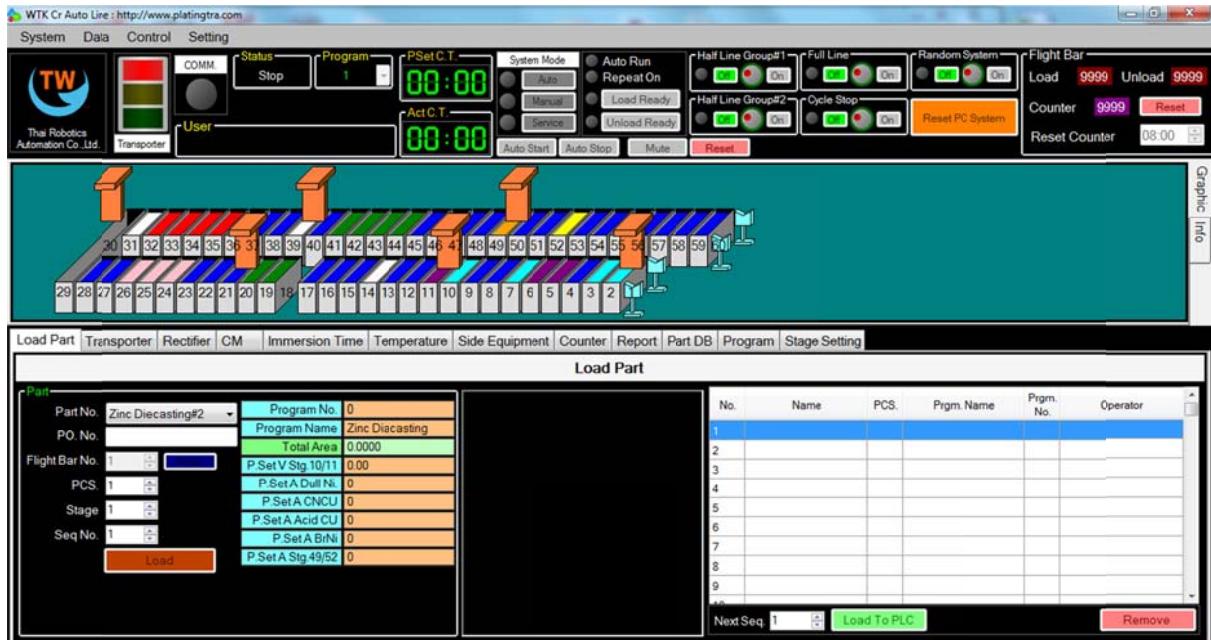




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## Standard function of MOS software

### 1. MAIN OPERATION SCREEN



### FUNCTION

- Machine mode select (AUTO/MANUAL/SERVICE).
- Machine status (Transporter alarm, Side equipment alarm, Actual cycle time, Flight bar count, Machine communication).
- Operation TAP, Loading TAP use to load part information to machine (The parts information customer can design what information needed).



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## 2. TRANSPORTER CONTROL

Load Part	Transporter	Rectifier	CM	Immersion Time	Temperature	Side Equipment	Counter	Report	Part DB	Program	Stage Setting
<b>Transporter</b>											
TA	TB	TC	TD	TE	TF						
Addr 9999 Ready Run Dest 9999 Step No. 9999 Inverter Fault Fault 9999	Addr 9999 Ready Run Dest 9999 Step No. 9999 Inverter Fault Fault 9999	Addr 9999 Ready Run Dest 9999 Step No. 9999 Inverter Fault Fault 9999	Addr 9999 Ready Run Dest 9999 Step No. 9999 Inverter Fault Fault 9999	Addr 9999 Ready Run Dest 9999 Step No. 9999 Inverter Fault Fault 9999	Addr 9999 Ready Run Dest 9999 Step No. 9999 Inverter Fault Fault 9999						
UP FW BW DN	UP FW BW DN	UP FW BW DN	UP FW BW DN	UP FW BW DN	UP FW BW DN						
Address Tank Min 1 Tank Max 1											

### FUNCTION

- A. This screen use for control transporter and monitor transporter status.
1. Address of transporter.
  2. Destination of transporter.
  3. Step running of transporter.
  4. Push bottom for control transporter.
  5. Fault alarm and Fault code.

## 3. RECTIFIER

Load Part	Transporter	Rectifier	CM	Immersion Time	Temperature	Side Equipment	Counter	Report	Part DB	Program	Stage Setting
<b>Rectifier</b>											
Electro Clean#1/2 (Stg#10-11)	Dull Ni#1 (Stg#19)	Dull Ni#2 (Stg#20)	CNCU#1 (Stg#24)	CNCU#1 (Stg#25)	CNCU#2 (Stg#26)	Acid CU#1 (Stg#32)	Acid CU#1 (Stg#33)	Acid CU#2 (Stg#34)			
PSet V 9999 Act A 9999 Act V 9999 Status -	PSet A 9999 Act A 9999 Act V 9999 Status -	PSet A 9999 Act A 9999 Act V 9999 Status -	PSet A 9999 Act A 9999 Act V 9999 Status -	PSet A 9999 Act A 9999 Act V 9999 Status -	PSet A 9999 Act A 9999 Act V 9999 Status -	PSet A 9999 Act A 9999 Act V 9999 Status -	PSet A 9999 Act A 9999 Act V 9999 Status -	PSet A 9999 Act A 9999 Act V 9999 Status -			
Preset Amp Manual Key In											

### FUNCTION

- A. This screen use for monitor rectifier value and control rectifier.
1. Monitor Preset Amp/Volte.
  2. Monitor Actual Amp/Volte.
  3. Switch Manual/Auto Mode.
  4. Fault code.
  5. Direct preset value key in.



#### **4. CHEMICAL MAINTENANCE**

Load Part	Transporter	Rectifier	CM	Immersion Time	Temperature	Side Equipment	Counter	Report	Part DB	Program	Stage Setting
<b>Chemical Maintaintance</b>											
Dull Ni#1 (Stg#19)	9999		Set	9999	99999999	Reset	9999		Set	9999	
Dull Ni#2 (Stg#20)	9999		Set	9999	99999999	Reset	9999		Set	9999	
CNCU#1 (Stg#24-25)	9999		Set	9999	99999999	Reset	9999		Set	9999	
CNCU#2 (Stg#26)	9999		Set	9999	99999999	Reset	9999		Set	9999	
Acid CU#1 (Stg#32-33)	9999		Set	9999	99999999	Reset	9999		Set	9999	
Acid CU#2 (Stg#34-35)	9999		Set	9999	99999999	Reset	9999		Set	9999	
BrNi#1 (Stg#41-42)	9999		Set	9999	99999999	Reset	9999		Set	9999	

Dosing Pump											
Run LL			Run LL			Run LL			Run LL		
Dull Ni#1 (Stg#19)			CNCU#1 (Stg#24-25)			Acid CU#1 (Stg#32-33)			BrNi#1 (Stg#41-42)		
Dull Ni#2 (Stg#20)			CNCU#2 (Stg#26)			Acid CU#2 (Stg#34-35)			BrNi#2 (Stg#43-44)		
			CNCU#3 (Stg#24-25)			Acid CU#3 (Stg#32-33)			BrNi#3 (Stg#41-42)		

#### **FUNCTION**

- A. This screen use for control Auto dosing pump for maintenance chemical in each tank.
1. Preset amp hour for plating tank chemical maintenance.
  2. Preset bar count or production area for other chemical tank.
  3. Preset dosing time for control dosing pump.
  4. Dosing status.
  5. Switch for control Dosing pump Auto/Manual.
  6. Level of chemical storage chemical tank.

#### **5. IMMERSION TIME**

Load Part	Transporter	Rectifier	CM	Immersion Time	Temperature	Side Equipment	Counter	Report	Part DB	Program	Stage Setting
<b>Actual Immersion Time (Sec.)</b>											
Load (Stg#1)	99.99	Soak Clean#1 (Stg#2)	99.99	Soak Clean#1 (Stg#3)	99.99	CW Rinse (Stg#4)	99.99	Soak Clean#2 (Stg#5)	99.99		
Soak Clean#2 (Stg#6)	99.99	Ultrasonic (Stg#7)	99.99	CW Rinse (Stg#6)	99.99	CW Rinse (Stg#9)	99.99	Electro Clean#1 (Stg#10)	99.99		
Electro Clean#2 (Stg#11)	99.99	CW Rinse (Stg#12)	99.99	CW Rinse (Stg#13)	99.99	Conc Acid (Stg#14)	99.99	Conc Acid Drag Out(Stg#15)	99.99		
CW Rinse (Stg#16)	99.99	CW Rinse (Stg#17)	99.99	- (Stg#18)	99.99	Dull Ni#1 (Stg#19)	99.99	Dull Ni#2 (Stg#20)	99.99		
Dull Ni Drag Out (Stg#21)	99.99	CW Rinse (Stg#22)	99.99	CW Rinse (Stg#23)	99.99	CNCU#1 (Stg#24)	99.99	CNCU#1 (Stg#25)	99.99		
CNCU#2 (Stg#26)	99.99	CNCU Drag Out (Stg#27)	99.99	CW Rinse (Stg#28)	99.99	Shuttle#1 (Stg#29)	99.99	Shuttle#2 (Stg#30)	99.99		
Acid Dip#1 (Stg#31)	99.99	Acid CU#1 (Stg#32)	99.99	Acid CU#1 (Stg#33)	99.99	Acid CU#2 (Stg#34)	99.99	Acid CU#2 (Stg#35)	99.99		
Acid CU Drag Out (Stg#36)	99.99	CW Rinse (Stg#37)	99.99	CW Rinse (Stg#38)	99.99	Acid Dip#2 (Stg#39)	99.99	CW Rinse (Stg#40)	99.99		
BrNi#1 (Stg#41)	99.99	BrNi#1 (Stg#42)	99.99	BrNi#2 (Stg#43)	99.99	BrNi#2 (Stg#44)	99.99	BrNi Drag Out (Stg#45)	99.99		

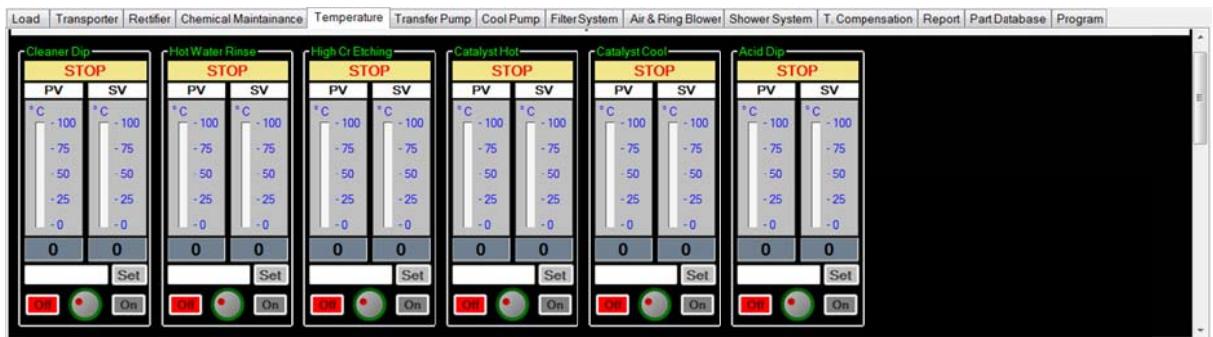
#### **FUNCTION**

This screen show the actual immersion of each tank during it have product in tank.



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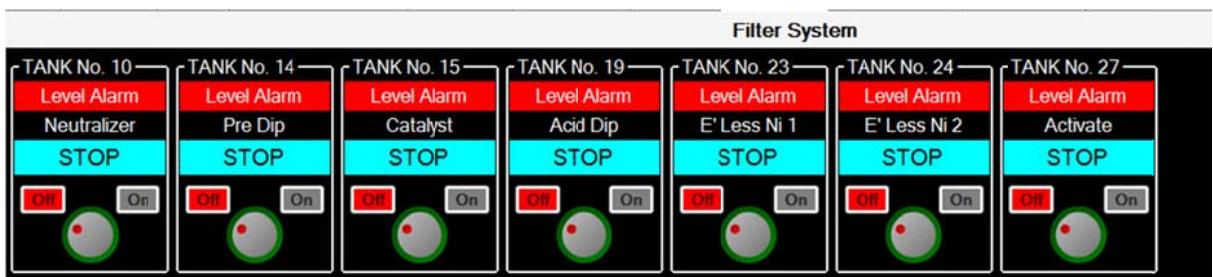
## 6. TEMPERATURE (Up to machine input if it have MOS can display)



### FUNCTION

- This screen use for control temperature.
  - Monitor Preset Temp./Actual Temp.
  - Key in Preset Temp.
  - Switch On/Of Temperature control.

## 7. SIDE EQUIPMENT (Up to machine input if it have MOS can display)

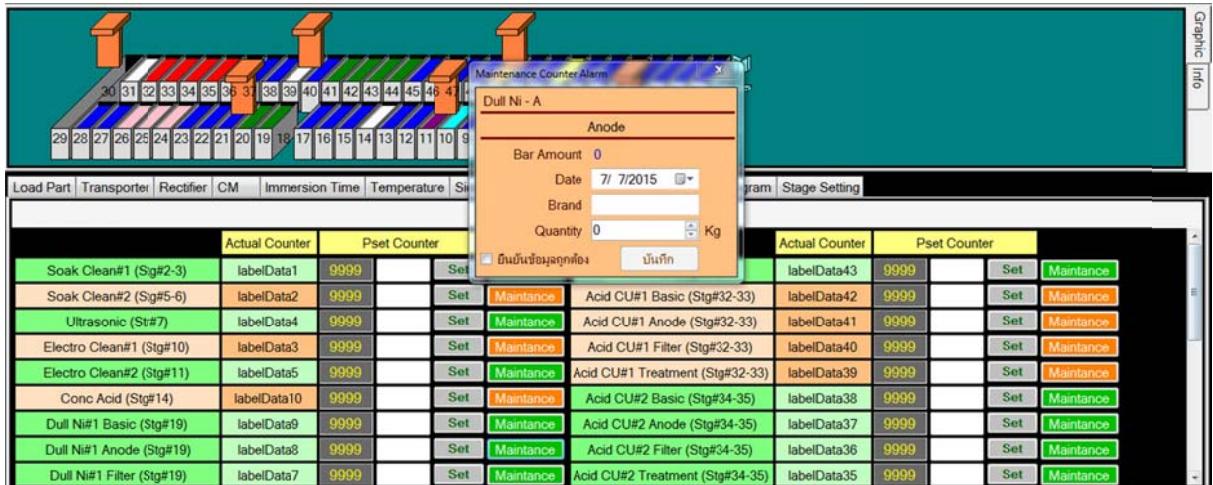


TANK No.	Flow	TANK No.	Transfer Pump
6	Water Rinse - R1	5	H-Cr Etching
7	Water Rinse - R2	6	Water Rinse - R1
16	Water Rinse - R3	15	Catalyst
38	Water Rinse - R4	37	Semi Bright Ni
40	Water Rinse - R5	39	Sulfer Ni
42	Water Rinse - R6	41	Bright Ni

## FUNCTION

- A. This Screen use for control side equipment (Filter pump, Circulation pump, Air blower, Weekly timer).

## **8. COUNTER FOR PRODUCTION MAINTENANCE (Up to machine input if it have MOS can display)**



## FUNCTION

- A. This screen use for production to maintenance machine such as.
1. Change filter cartridge.
  2. Refill anode ball.
  3. Refill chemical.
  4. Print the request consumptions material.

## **9. REPORT**



- A. This screen contents the production report. It will report machine condition during product pass each of process tank such as Actual temperature, actual amp-hour, plating tank.
- B. The sale report, this screen customer can see the sale price and production cost for each parts and it will show out profit.

- C. Maintenance report, this report record the production maintenance report it will show out the consumption of material.
- D. All report auto save in data base.



## **10. PART DATA BASE**

This screenshot shows the 'Part Database' software interface. At the top, there is a menu bar with options: Load Part, Transporter, Rectifier, CM, Immersion Time, Temperature, Side Equipment, Counter, Report, Part DB, Program, and Stage Setting. Below the menu is a title bar 'Part Database'. On the left, a 'Part's Information' panel contains fields for Part No., Part Name, Program (set to ZincDiecasting), Area (0.0000), and several parameters for PsetV Stg.10/11. It also includes buttons for Delete, Clear, Add, and Save. On the right, a 'Parts Database' panel lists 'Zinc Diecasting#2' with a delete icon. A toolbar with various icons is located at the bottom of the main window.

### **FUNCTION**

- A. This screen use for set up parts data for production running such as Current density, Part picture, Program to run this part.

## **11. Option PROCESS SETTING (Only for random loading system)**

This screenshot shows the 'Program' screen of the process setting software. The top menu is identical to the Part Database interface. The main area is titled 'Program' and contains a table for defining process sequences. The table has columns for Process Name (Zinc Diacasting), Process No (1), New, Save, Save As, and Delete. The data table rows are as follows:

Seq	Tank No.	Tank Name	MIN (Min)	MIN (Sec)	MAX (Min)	MAX (Sec)	Priority	Drain Time
1	1	Load Station	2	0	4	0	0	0
2	5,6	Soak Clean 2 (Zn)	10	0	12	0	1	0
3	7	Ultrasonic (Zn)	3	0	5	0	1	0
4	8	CW Rinse	0	1	0	5	0	0
5	9	CW Rinse	0	1	0	5	0	0
6	10	Electro Clean (Zn)	1	0	2	0	1	0
7	12	CW Rinse	0	1	0	5	0	0
8	13	CW Rinse	0	1	0	5	0	0
0	1 (Load (Stg#1))		0	0	0	0	0 (Lo)	0

At the bottom of the table are buttons for Remove, Insert, Edit, and Add.

### **FUNCTION**

- A. This screen only for “RANDOM LOADING SYSTEM”. It use for setting up process sequence, Immersion time for each tank, drain time and Priority.



## 12. Option TANK ENABLE/DISABLE (Only for random loading system)



### FUNCTION

- A. This screen use for setting to use or no use of each tank.