



COMPUTER INJECTION MOLDING MACHINE

CDC-88

DIGITAL CONTROLLER

OPERATION MANUAL



ASIAN PLASTIC MACHINERY CO., LTD.

(A SUBSIDIARY OF CHEN HSONG HOLDINGS LTD.)

ASIAN PLASTIC CDC-88 MULTI-FUNCTION COMPUTER

FEATURES:

Japanese-intacted Computer Contoller, passed by JIS various inspection standards, 120-character Chinese-menu super-large LCD screen, applicable power supply ranging AC85-264V 50/60HZ with high stability, stored data may retain for more than 5 years under power-off status, safe and reliable, Chinese-English-Japanese menu randomly at choice, easy to learn for operation.

BASIC FUNCTIONS:

1. Extra-large capacity of memory for the storage of 150 sets of mold formation data, such as time, numbers, pressure, speed, stroke, quantative, mold thickness, mold number notes, selective conditions, temperature of raw material.
2. Lock up setting data to prevent error revision.
3. Auto adjustment of mold thickness, tolerance within 0.1mm.
4. Auto setting high-pressure position value.
5. Heating time setting within 100% nozzle thermostat.
6. Temperature PID control, adjustable 30°C-500°C, K type thermocouple.
7. Under-temperatuer Lockup, Auto thermostat setting.
8. High/low temperatuer deviation setting and thermocouple disconnection checkup during operation.
9. Nozzle choke, overfeed checkup.
10. Screw rotational speed display, stroke setting for decompress before plasticizing and overfeed protection.
11. Injection four speeds, six pressures, plasticizing two speeds and two pressures switchover.
12. Clamp, injection and ejection all adopt precision optical scale.
13. Data input error prevention and warning.
14. Formation numbers and batch number setting in conjunction with Auto Stop.
15. Elbow auto lubrication setting, oil short alarm.
16. Operating action display.
17. Internal program output point, input point, timing and counting status check.
18. Modular data free choice of duplicating or clearing, and preset modular dats within computer available to save time.

DESCRIPTION OF SELECTIVE FUNCTIONS:

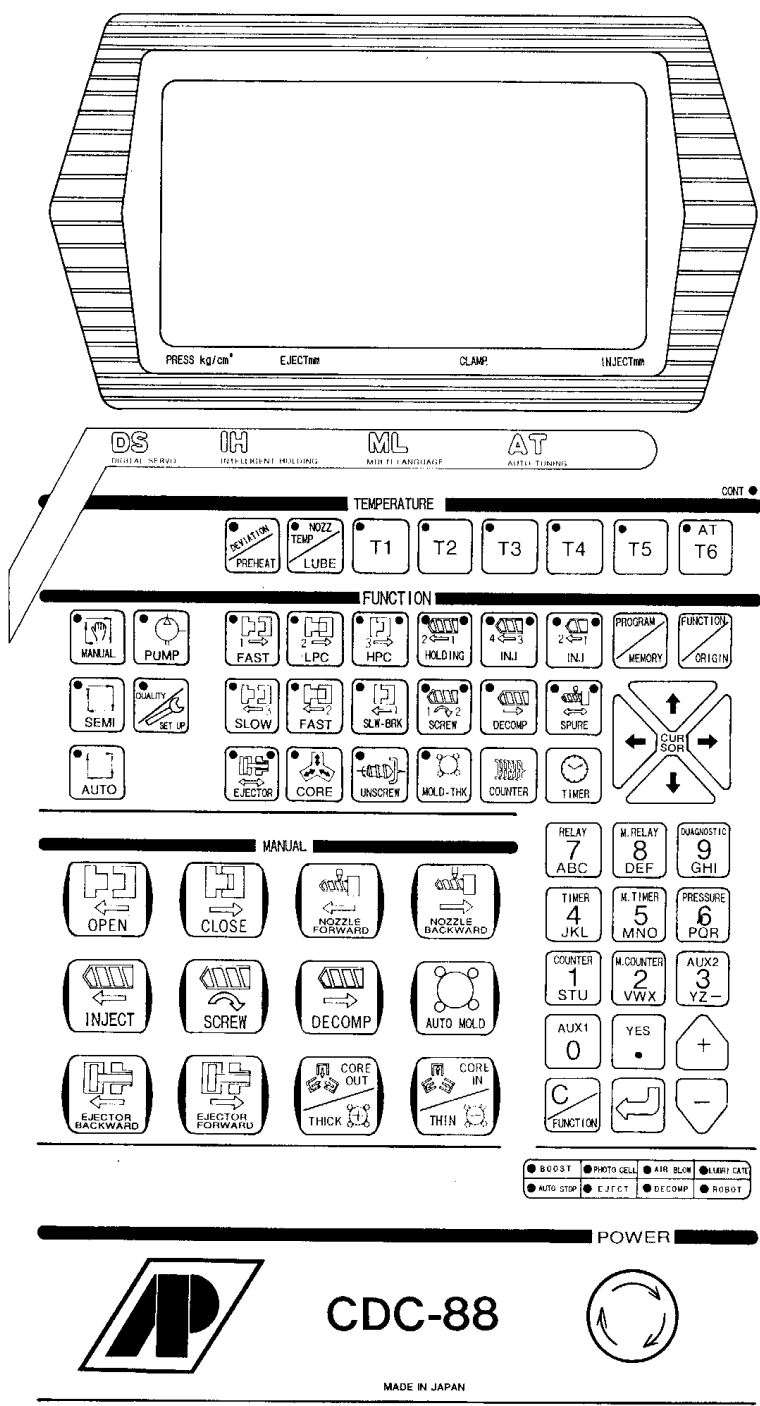
1. Computer incorporated modular data is accessible by IC card to facilitate data moving to another unit, and to store formation status on IC card to assure consistent quality.
2. Action pressure value menu display.
3. Clamp weight menu display.
4. Injection choke auto switch to holding.
5. Finished products, semi-product auto sorting, signal output.
6. Injection closed loop control system.
7. Vibrating ejection, backward speed and pressure with two stages adjustable.
8. Ejectable during opening.
9. Plasticizing during opening.
10. Auto cleaning up material tube.
11. Core In/Out multi-function selection.
12. Screwed/unscrewed multi-function selection.
13. Accumulator fast injection.
14. Products blowing.
15. Auto mold change interface.
16. Robot arm interface I/O 4-point input and 2-point output.
17. Extension interface I/O 12-point input and 6-point output.

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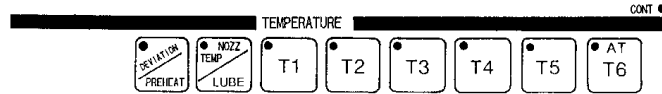
CHAPTER 1 COMPUTER PANEL INTRODUCTION

1-1 COMPUTER PANEL DRAWING



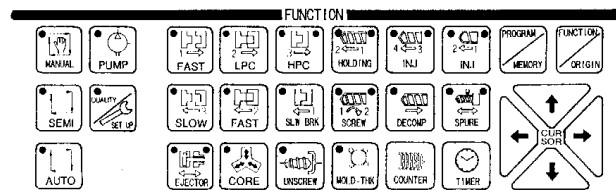
1-2 Temperature Control Buttons

TEMPERATURE



This Keyboard is provided for setting, change of data shown on temperature monitor.

1-3 Formation Condition Control Buttons



This Keyboard has following functions:

- (1) Select formation operating mode:



- (2) Set up formation condition in respect of position, speed, pressure, time and counter.
- (3) Set up necessary data for automatic mold adjustment.
- (4) Change and duplicate mold number.
- (5) Select necessary function or action for formation subject to the requirement of finished product and mold design.
- (6) Move cursor to the position as required for data change, under any operating mode.
- (7) Select data and program from memory card.

FORMATION CONDITION DIGITAL BUTTONS

THIS KEYBOARD HAS FOLLOWING FUNCTIONS:

- (1) Enter necessary data of condition for formation:

Speed setting 01-99, zero speed at "00" setting.

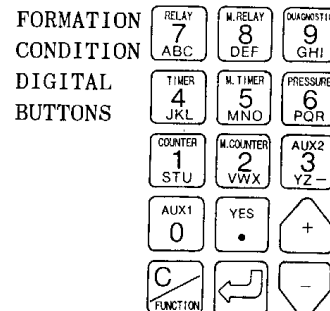
Pressure setting 01-99, zero pressure at "00" setting.

Position setting 0000-999.9mm.

Time setting 0-6553.5sec.

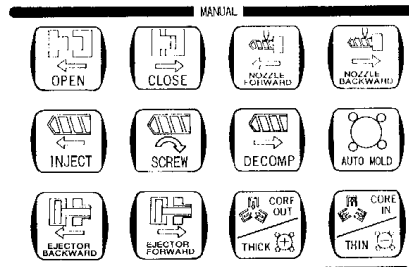
Counter setting 0-65535.

Mold thickness setting 0-6553.5mm.



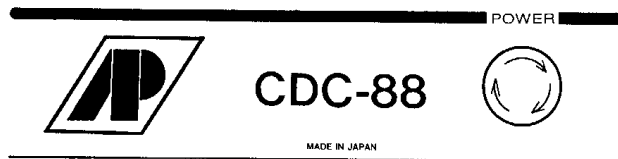
- ② Check whether or not Keyboard function is normal.
- ③ Read computer control program.
- ④ Inspect operating status of output, input, timer, counter.

1-4 Manual Operation Buttons



- ① Manual Operation Keyboard can be independent in operating some action of whole action cycle.
- ② Draw core and mold adjustment operations are sharing one single button; when mold adjustment function intends for use, it has to be on mold adjustment menu (refer to CHAPTER 2 MENU (16) DESCRIPTION).

1-5 Power SW



Red Button is POWER SW for this Machine and applicable power ranging

AC. 5V-AC264V 50/60HZ.

The Machine has voltage stabilizer system that can sustain a large

range of voltage variation to protect the Machine against voltage

affection.



CHAPTER 2 MENU OPERATING INSTRUCTION

CDC-88 MENU

MENU	FUNCTION
00	POWER ON
01	OPERATING AND TEMPERATURE VALUE SETTING
02	CLAMP SETTING
03	OPEN SETTING
04	EJECT SETTING
05	CORE DRAW SETTING
06	UNSCREW SETTING
07	INJECTION SETTING
08	PRESSURE HOLD SETTING
09	PLASTICIZING SETTING
10	NOZZLE SETTING
11	LUBRICATION SETTING
12	CYCLES SETTING
13	TEMPERATURE DEVIATION SETTING
14	TIME SETTING
15	TIMER SETTING
16	MOLD THICKNESS AND FORCE SETTING
17	I/O STATUS
18	INTERNAL RELAY STATUS
19	TIMER STATUS
20	COUNTER STATUS
21	MOLD NUMBER SELECT
22	PROGRAM ACCESS
23	ENCODER AND INITIAL DATA SETTING
24	FUNCTION SELECT
25	QUALITY STATISTICS
26	PRESSURE SETTING
27	PROGRAM STATUS
28	LANGUAGE CHANGE
29	MEMORY DATA CLEAR
30	STANDBY SPEED AND PRESSURE SETTING

MENU (00):POWER ON



CHEN HSONG MACHINERY
TEL:(886)03-452-2288)
FAX:(886)03-452-0261
M_NO:SM_90 S_NO:T-4567
DATE 1993-03-
VERSION:ACA-P4
<< SELF (0A) TESTING >>

1. Upon "POWER ON" and 6 seconds after System "SELF TEST", automatic switch to Menu (01).
2. During System "SELF TEST", press down "  " plus "  " will appear Menu (28) for "Language Switchover".
3. Program in use, ACA-P4 has different number subject to the function of the machine.

MENU (28): LANGUAGE SWITCHOVER

language [AA]

1. Chinese
2. Japanese
3. English (°C)
4. English (°F)

1. During "SYSTEM SELF TEST" upon "POWER ON", i. e. Menu (01), press down "  " plus "  " will appear Menu (28).
2. When language switchover is desired, enter language [AA] position "1" to select language Menu as desired.
For example, when Chinese Menu display is desired, enter [AA] position "1" and operating Menu will be in Chinese display.
* °C and °F can not be switched over at random.

MENU (01): OPERATION AND TEMPERATURE SETTING

1. Minu Display during Semi-Auto or Auto operation is given below:

TN	T1	T2	T3	T4	T5	T6 °C
AA%	BBB	CCC	DDD	EEE	FFF	GGG S
???	???	???	???	???	???	???
SCREW	50rpm		INJ.	3.5 S		
COUNT	65530		COOL	4.5 S		
PG NO.	1		CYCL	0 S		
???	???:?	???:?.mm	???:?.?			

Force Eject Clamping Injection

2. Menu Display during Manual operation is given below:

TN	T1	T2	T3	T4	T5	T6 °C
AA%	BBB	CCC	DDD	EEE	FFF	GGG S
???	???	???	???	???	???	???
COUNT	65530					
PG NO.	1					
???	???:?	???:?.mm	???:?.?			

Force Eject Clamping Injection

3. Press down  or  or  Menu (01) appears.

4. ??? stands for computer measuring data display.

5. "AA" :Nozzle temperature ratio data setting:

"BBB":1st stage temperature setting.


"CCC":2nd stage temperature setting.

"DDD":3rd stage temperature setting.







"EEE":4th stage temperature setting.


"FFF":5th stage temperature setting (selected or SM-250 above).

"GGG":6th stage temperature setting (selected or SM-250 above).

6. Under "AUTO" status may alter injection and cool time by moving Cursor to display position of injection or cool time and use numerical button to enter time data as desired and then press down  to end data alteration.

7. Under MENU (01) if intend to change temperature data, it shall be performed subject to stage change as desired:




(1) Press down  OR  OR  OR  OR  OR  , and Cursor displays Menu.

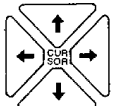
(2) Press down  and move to the stage as desired to enter


data , desired.

MENU (02):CLAMPING

CLAMPING			
	SP.	PR.	POSITION
FAST	AA%	BB%	CCCC. Cmm
LOW PRES	DD%	EE%	FFFFFp
H. LOCK	GG%	HH%	IIIIIp
CLA. AUX	JJ%	KK% AT	LLLLLp
FORCE	MMMT.		
???	???.?	????.?mm	????.?

1. Press down  or  or  or, Menu (02) appears.

2. Press down  to select CLAMPING parameter setting, and

enter data as desired, then press down "  " to end setting.

Where:

- "AA":FAST CLAMPING SPEED setting
- "BB":FAST CLAMPING PRESSURE setting
- "CCCC.C":FAST CLAMPING STOP position setting (unit:mm)
- "DD":LOW PRES CLAMPING SPEED setting
- "EE":LOW PRES CLAMPING PRESSURE setting
- "FFFFF":LOW PRES CLAMPING STOP position setting (unit:p)

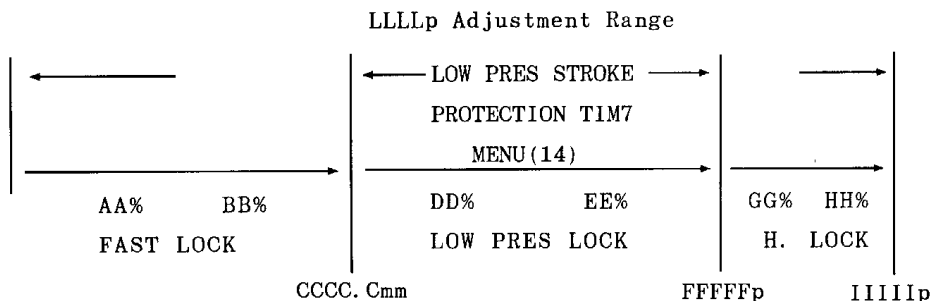
MANUAL operation to Mold Lock position, when Crank not yet

stretches straight, depress MANUAL LOCK  and  button may

achieve AUTO setting H. LOCK point (FFFFFp data).




- "GG":H. LOCK SPEED setting
- "HH":H. LOCK PRESSURE setting
- "IIII.I":H. LOCK STOP position setting (unit:p)
- "JJ":CLAMP STANDBY SPEED setting (optional)
- "KK":CLAMP STANDBY PRESSURE setting (optional)
- "LLLL":CLAMP ACTION STANDBY position setting (optional)
- "MMMM":CLAMP FORCE display, automatic calculation of data from FFFFFp (optional)

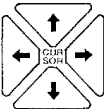

* Position setting condition $CCCC.C \geq FFFFFp \geq IIIIIp$, IIIIIp without limit.



MENU (03):OPENING

OPENING			
	SP.	PR.	POSITION
BREAK	NN%	OO%	PPPP. Pmm
FAST	QQ%	RR%	SSSSp
SLOW	TT%	UU% TO	VVVVp
MAX. OPENING STROKE			WWW. W
???	???. ?	?????. ?mm	?????. ?

1. Press down  or  or  OR, Menu (03) appears.

2. Press down  to select OPENING parameter setting, and enter data as desired, then press down "  " to end setting.

Where:

"NN":BREAK speed setting

"OO":BREAK [ewssire settin

"PPPP":BREAK stop position setting (unit:p) "PPPP" value can refer to MENU(02) LOW PRES CLAMPING STOP position "FFFFp".But can't smaller than "FFFFp" setting value

"QQ":FAST opening speed setting

"RR":FAST opening pressure setting

"SSSS.S":FAST opening speed setting

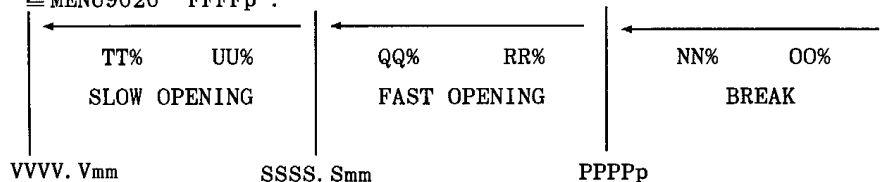
"TT":SLOW opening speed setting

"UU":SLOW opening pressure setting

"VVVV.V":SLOW opening stop positing setting (unit:mm)

"WWW.W":MAM. OPENING STROKE display

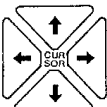
* Position setting condition $WWW.W_{mm} \geq VVVV.V_{mm} \geq SSSS.S, , \geq PPPPp \geq MENU9020 "FFFFp"$.




MENU (04):EJECTOR

EJECTOR			
CYCLE	AA	VIBRAK	BB
MAX. POSIT	CCC. C	HOLD	DD. DS
START EJECT AT OPN		EEEE. E	mm
	SP.	PR.	POSITmm
FORWARD	FF%	GG%	HH. H
BACKWARD	II%	JJ%	KK. K
???	???. ?	?????. ?mm	?????. ?

1. Press down  , Menu (04) appears.

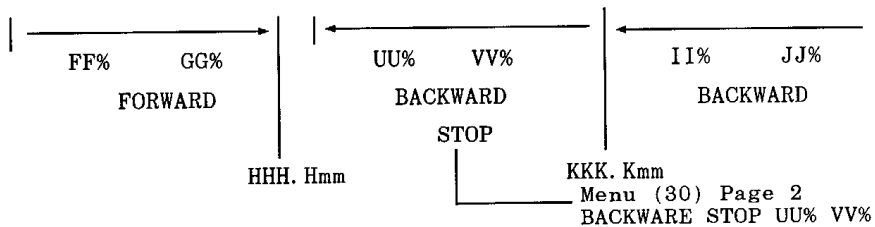
2. Press down  to select EJECTOR parameter setting, and

enter data as desired, then press down "  " to end setting.

Where:

- "AA":EJECTOR CYCLE setting
- "BB":EJECTOR VIBRATION setting
- "CCC. C":MAX. STROKE display
- "DD. D":EJECTOR STOP time. Match Menu (24) for "EJECTOR HOLD" setting
- "EEEE. E":START EJECT AT OPENING POSITION setting (Optional)
- "FF":FORWARD→Speed setting
- "GG":FORWARD→Pressure setting
- "HH. H":FORWARD→MAX. Position setting
- "II":BACKWARD→Speed setting
- "JJ":BACKWARD→Pressure setting
- "KK. K":BACKWARD→Position setting

* Position setting condition CCCC. Cmm ≥ HH. Hmm ≥ KK. Kmm.




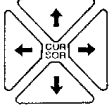
	I/R	SP.	PR.
AUX 1	E68	MM%	NN%
AUX 2	E69	OO%	PP%
AUX 3	E70	QQ%	RR%
RESET D/A	E71	SS%	TT%
EJE. STOP	E72	UU%	VV%
MOLD THIN	E74	WW%	XX%
???	???. ?	?????. ?mm	?????. ?


<PAGE 2>

MENU (05):CORE SETTINGS



CORE SETTINGS			
PUSH POS	AAAAA	AAAAA	BBBB. B
PULL POS	CCCCC	CCCCC	DDD. D
CORE CONFIRM BY	EEEE	EEEE	
	SP.	PR.	TIIME
PUSH CORE	FF%	GG%	HH. HS.
PULL CORE	II%	JJ%	KK. KS.
???	???. ?	?????. ?mm	?????. ?

1. Press down  , Menu (05) appears.



2. Press down  to select CORE parameter setting, and enter

data as desired, then press down "  " to end setting.

Where:

"AAAAA":CORE selection: Use  /  to select the following four modes:

- (1)Before CLAMPING
- (2)After CLAMPING
- (3)CLAMP AT "BBB. B": PUSH CORE EFFECTIVE UNDER CLAMPING enter CLAMPING POSITION
- (4)NOT USE

"CCCCC":PULL CORE selection: Use  /  to select the following four modes:

- (1)Before OPENING
- (2)After OPENING
- (3)OPEN AT "DDD. D": PULL CORE EFFECTIVE UNDER OPENING enter OPENING POSITION
- (4)NOT USE

"EEEE. E":CORE CONFIRM BY: Using  /  to select the following two modes:

- (1)LIMIT SETTING: (SELECTED)
 - ①PUSH CORE (INPUT 9)
 - ②PULL CORE (INPUT 8)
- (2)TIME SETTING:
 - ①PUSH CORE TIME SETTING ("HHH. H"): TIM 11 (0.0 SEC-99.9 SEC) when select LIMIT POSITION setting, the data is STROKE TIME ALARM

②PULL CORE TIME SETTING ("KKK.K"): TIM 12 (0.0 SEC-99.9
SEC) when select LIMIT POSITION setting, the data is
STROKE TIME ALARM

"FF":PUSH CORE Speed setting

"GG":PULL CORE Pressure setting

"II":PULL CORE Speed setting

"JJ":PUSH CORE Pressure setting.

NOTE:

① CLAMP AT "BBB.B" POSITION and POEN AT "DDD.D" POSITION, use
MIN.value is "0mm", MAX.value can't bigger than MENU(03) SLOW
OPENING STOP "VVVV.POSITION.

② Whem CORE and UNSCREW use same time, during CLAMPING, first
PUSH CORE action then UNSCREW FARWARD. But during OPENING,
first UNSCREW BACKWAR action then PULL CORE. If use same set-
ting position action, (PUSH CORE "BBB.B" POSITION and UNSCREW
FARWARD "MMM.M" POSITION, or, PUSH CORE "DDD.D" POSITION and
UNSCREW BACKWARD "OOO.O" POSITION), must be bigger 10.0mm dis-
tance between CORE and UNSCREW.




MENU (06):UNSCREWING (Optional)



UNSCREWING					
FORWARD POS	LLLLLLLLL	MMM.M			
BACKWARD POS	NNNNNNNNN	OOO.O			
UNSCREW BY:	PPPPPP				
	SP. SP. PR. TIME CNT.				
FORWA	QQ% RR% SS% TT.T UUUU				
BACKW	UU% WW% XX% YY.Y ZZZZ				
???	???.? ????.?mm ?????.?				

1. Press down  , Menu (06) appears.



2. Press down  to select UNSCREWING parameter setting, and

enter data as desired, then press down "  " to end setting.

Where:

"LLLL":FORWARD POS. selection: Use  /  to select the following four modes:

- (1)NOT USE
- (2)Before CLAMPING
- (3)After CTAMPING
- (4)CLAMP AT "MMM.M": UNSCREWING EFFECTIVE UNDER CLAMPING
enter CLAMPING POSITION

"NNNN":BACKWARD POS. selection: Use  /  to select the following four modes:

- (1)NOT USE
- (2)Before OPENING
- (3)After OPENING
- (4)OPEN AT "OOO.O": UNSCREWING EFFECTIVE UNDER OPENING enter OPENING POSITION

"PPPP.P":UNSCREW BY: Using  /  to select the following two modes:

- (1)CYCLES COUNT
 - ①"UUU":BACKW/FORWA CYCLES COUNT, CNT 2.
 - ②"ZZZ":UNSCREW FAST CYCLES COUNT, CNT 3.
- (2)TIMING:
 - ①"TT.T":FORWA. TIMING, TIM 16
 - ②"YY.Y":BACKW. TIMING, TIM 15

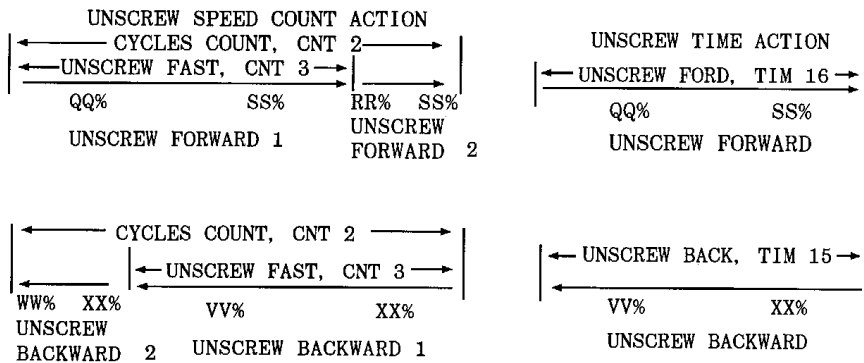
"QQ":FORWARD Speed 1 setting

"RR":FORWARD Speed 2 setting
 "SS":FORWARD Presure setting
 "UU":BACKWARD Speed 1 setting
 "WW":BACKWARD Speed 2 setting
 "XX":BACKWARD Presure setting

NOTE:

① CLAMP AT "MMM.M" POSITION and OPEN AT "OOO.O" POSITION, use MIN.value is "0mm", MAX.value can't bigger than MENU(03) SLOW OPENING STOP "VVVV.POSITION.

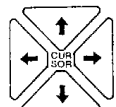

② When CORE and UNSCREW use same time, during CLAMPING, first PUSH CORE action then UNSCREW FARWARD. But during OPENING, first UNSCREW BACKWAR action then PULL CORE. If use same setting position action, (PUSH CORE "BBB.B" POSITION and UNSCREW FARWARD "MMM.M" POSITION, or, PUSH CORE "DDD.D" POSITION and UNSCREW BACKWARD "OOO.O" POSITION), must be bigger 10.0mm distance between CORE and UNSCREW. FLOW CHART:



MENU (07):INJECTION

INJECTION				
INJ. TIME	AAA. As	PLAST.	POSB	BBB. B
	SP.	PR.	CUSH	CCC. C
INJECT 1	DD%	EE%		FFF. F
INJECT 2	GG%	HH%		III. I
INJECT 3	JJ%	KK%		LLL. L
INJECT 4				MMM. M
???	???. ?	????.?mm		????. ?

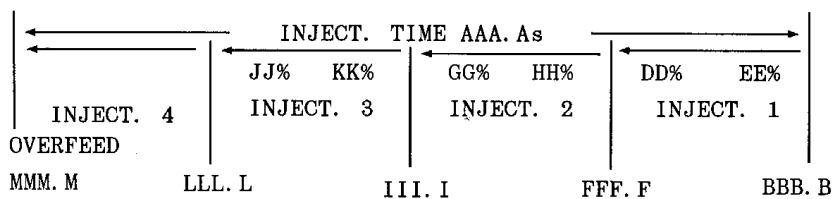
1. Press down  or  Menu (07) appears.

2. Press down  to select INJECT. parameter setting, and enter data as desired, then press down "  " to end setting.

Where:

- "AAA. A":INJECT TIME setting, TIM 00
- "BBB. B":PLAST. MAX. POS. setting
- "CCC. C":INJECT. END. POS. display
- "DD":INJECT. 1 speed setting
- "EE":INJECT. 1 pressure setting
- "FFF. F":INJECT. 1 END. POS. setting
- "GG":INJECT. 2 speed setting
- "HH":INJECT. 2 speed setting
- "III. I":INJECT. 2 END. POS. setting.
- "JJ":INJECT. 3 speed setting
- "KK":INJECT. 3 pressure setting
- "LLL. L":INJECT. 3 END. POS. setting
- "MMM. M":INJECT. 4 INSPECT OVERFEED POS. setting.

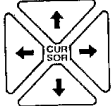
* Position setting condition $BBB. B_{mm} \geq FFF. F_{mm} \geq III. I_{mm} \geq LLL. L_{mm} \geq MMM. M_{mm}$.




MENU (08):HOLDING

HOLDING					
INJ. TIME	AAA. As	CUSH.		BBB. B	
	SP.	PR.	TIME		
INJECT 4	CC%	DD%			
HOLD 1		EE%	FF. FS		
HOLD 2		GG%	HH. HS		
INJ. MODE: I I I I I I I I I I					
???	???. ?	????.?mm	????.? ?		



1. Press down  Menu (08) appears.

2. Press down  to select HOLDING parameter setting, and enter

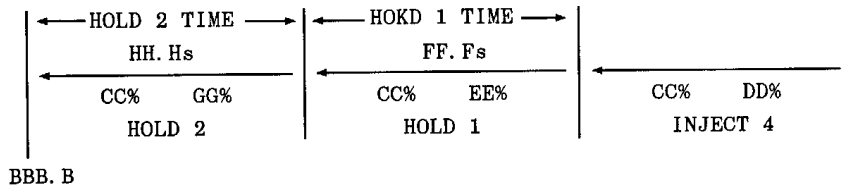
data as desired, then press down "  " to end setting.

Where:

- "AAA. A": INJECT TIME setting, TIM 00
- "BBB. B": PLAST. MAX. POS. setting
- "CC": INJECT 4 and HOLDING speed setting
- "DD": INJECT. 4 pressure setting
- "EE": HOLD 1 pressure setting
- "GG": HOLD 2 pressure setting
- "FF. F": HOLD 1 TIME setting, data setting at TIM 13
- "HH. H": HOLD 2 TIME setting, data setting at TIM 14

I I I I I I I I I I: INJECT. MODE selection: Use  /  to select the following four modes:



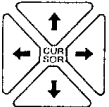

- (1) CLOSE (Optional)
- (2) OPEN (Standard)
- (3) CLOSE+HOLDING (Optional)
- (4) OPEN+HOLDING (Optional)



BBB. B

MENU (09):PLASTICISING

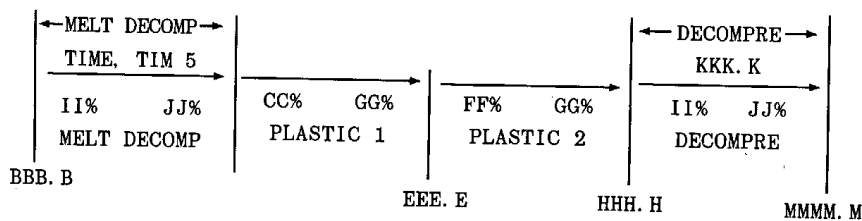
PLASTICISING				
DELAY	AAA. As	CUSH.	BBB. B	
	SP.	PR.	POSITION	
PLASTIC 1	CC%	DD%	TO	EEE. Emm
PLASTIC 2	FF%	GG%	TO	HHH. Hmm
DECOMPRE	II%	JJ%	FOR	KKK. Kmm
MAX. TR	LLLL. Lmm	MMM. Mmm		
???	???. ?	????. ?mm	????. ?	

1. Press down  or  Menu (09) appears.
2. Press down  to select PLASTIC parameter setting, and enter data as desired, then press down " to end setting.
3. In AUTO state, if want first DECOMPRE action then PLASTIC, must be setting "MELT DECOMP" time in MENU(14) and select "DECOMP" ON state in MENU(2).

Where:


- "AAA.A":DELAY TIME setting, data setting at TIM 08
- "BBB.B":INJECT. MAX. POS. DISPLAY
- "CC":PLASTIC 1 speed setting
- "DD":PLASTIC 1 pressure setting, range:10%-99%
- "EEE.E":PLASTIC 1 END. POS. setting
- "FF":PLASTIC 2 speed setting
- "GG":PLASTIC 2 pressure setting, range:10%-99%
- "HHH.H":PLASTIC 2 END. POS. setting
- "II":DECOMPRE speed setting
- "JJ":DECOMPRE pressure setting, range:10%-99%
- "KKK.K":STROKE setting
- "LLLL.L":MAX. STROKE display
- "MMM.M":PLASTIC and DECOMPRE END. POS. DISPLAY (KKK. Kmm+HHH. Hmm)

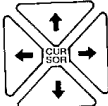
* Position setting condition $LLLL. Lmm \geq MMM. Mmm \geq EEE. Emm$




MENU (10):CARRIAGE

CARRIAGE						
		SP.	PR.		TIME	
FAST	FORW.	AA%	BB%	FOR	CC.	Cs
SLOW	FORW.	DD%	EE%	TO	LIMIT	
BACKWARD		FF%	GG%		HH.	HHs
???	???.?	????.	?mm	????.	?	

1. Press down  , Menu (10) appears.

2. Press down  to select CARRIAGE parameter setting, and

enter data as desired, then press down "  " to end setting.

Where:

"AA":FAST FORW. speed setting

"BB":FAST FORW. pressure setting

"CC.C":FAST FORW. STROKE TIME setting, data setting at TIM 17

"DD":SLOW FORW. speed setting

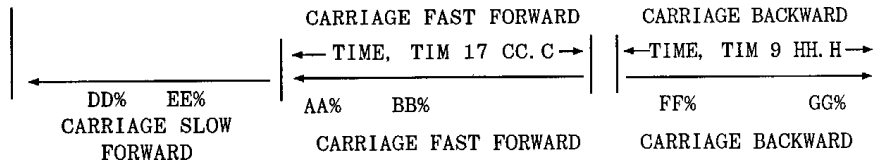
"EE":SLOW FORW. pressure setting

"FF":BACKWARD speed setting

"GG":BACKWARD pressure setting

"HH.H":BACKWARD STROKE TIME setting, data setting at TIM 9


CARRIAGE FORWARD
LIMIT




MENU (11):LUBRICATION

LUBRICATION			
LUBE	EVERYAAA	CYCLES	
LUBE PERIOD	BB.Bs		
LUBE ALARM	CC.Cs		
NEXT LUBE AFT DDDD CYCLES			
???	???.?	????.?mm	????.?

1. Press down  +  , Menu (11) appears.

2. Press down  to select LUBRICATION parameter setting, and

enter data as desired, then press down "  " to end setting.

Where:

"AAAA":LUBE EVERY CYCLES, data setting at CNT 10


"BB.B":LUBE PERIOD, time data setting at TIM 25

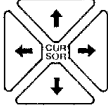
"CC.C":LUBE ALARM TIME, time data setting at TIM 26 (optional)


"DDDD":NEXT LUBE AFT DDDD CYCLES.

MENU (12):CYCLES COUNTER

CYCLES COUNTER		
	SETTING	PRESENT
CYCLES	AAAAA	BBBBB
REJECT	CCCCC	DDDDD
BATCH	EEEEEE	FFFFFF
PRO. TIME	GGGG.G hr	HHHH.H hr
AUX	IIIII	JJJJJ
???	???.?	????.?mm ????.

1. Press down  , Menu (12) appears.




2. Press down  to select COUNTER parameter setting, and

enter data as desired, then press down "  " to end setting.

Where:


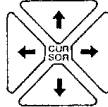

- "AAAAA":CYCLES of ACCEPTED setting, CNT 1
- "BBBBB":PRESENT CYCLES display
- "CCCCC":REJECT ALARM setting, CNT 4 (Optional)
- "DDDDD":BATCH of REJECT display (Optional)
- "EEEEEE":BATCH setting, CNT 5
- "FFFFFF":BATCH display
- "GGGG.G":PRODUCTION TIME setting, CNT 9
- "HHHH.H":PRODUCTION TIME display
- "IIIII":AUX. COUNTER setting, CNT 8 (Optional)
- "JJJJJ":AUX. COUNTER CYCLES display (Optional)

NOTE:

- (1)TOTAL FORMING CYCLES = CYCLES of ACCEPTED (AAAAA) × BATCH (EEEEEE)
- (2)If screen display " PRODUCTION REACHED THE TARGET" alarm and CYCLES of ACCEPTED not set zero. press  key, that can cancel alarm and reset CYCLES of ACCEPTED to zero, repeat count FORMING CYCLES.
- (3)If not yet reached CYCLES of ACCEPTED setting, want to reset CYCLES of ACCEPTED to zero and repeat count FORMING CYCLES. Depress  key +  key that can demand to reset CYCLES of ACCEPTED zero.





MENU (13):TEMPERATURE DEVIATION

TN	T1	T2	T3	T4	T5	T6	°C
AA%	BBB	CCC	DDD	EEE	FFF	GGG	S
???	???	???	???	???	???	???	M
HI/LOW ALARM RANGE 20 TO 99							
HIGH	+	HH	+	II	+	JJ	+ KK + LL + MM
LOW	-	NN	-	OO	-	PP	- QQ - RR - SS
PREHEAT SETTING IS							-TT%
???	???.?	???.?	???.?	mm	???.?	???.?	?

1. Press down  and then  to select HI/LOW ALARM RANGE, enter desired data and press down  to end setting.


Where:

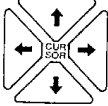
- "HH":T1 HIGH ALARM setting
- "II":T2 HIGH ALARM setting
- "JJ":T3 HIGH ALARM setting
- "KK":T4 HIGH ALARM setting
- "LL":T5 HIGH ALARM setting
- "MM":T6 HIGH ALARM setting
- "NN":T1 LOW ALARM setting
- "OO":T2 LOW ALARM setting
- "PP":T3 LOW ALARM setting
- "QQ":T4 LOW ALARM setting
- "RR":T5 LOW ALARM setting
- "SS":T6 LOW ALARM setting
- "TT":FOR TEMP. HOLDING, SETTING TEMP. REDUCTION RATIO


2. For HOLD selection, press down  +  LED flashing on/off to mean HOLDING, if intend to cancel HOLDING, press down  +  is OK.

MENU (14):TIMERS

TIMERS			
INJECT	AA. A	COOLING	BB. B
HOLDTNG 1	CC. C	HOLDING 2	DD. D
RECYCLE	EE. E	L. P. CLAMP	FF. F
DELAY PLA	GG. G	GHG. COLOR	HH. H
AUX.	II. I	MELT DEC	JJ. J
CYCLE??	KK. K	AIR BLOW	LL. L
???	???. ?	?????. ?mm	?????. ?

1. Press down  Menu (14) appears.

2. Press down  to select time setting, and enter data as

desired, then press down "  " to end setting.

Where:

- "AAA.A":TIM 0, INJECT 1 TO 4 TIME setting, adjust range:0-600.0 SEC
- "BBB.B":TIM 1, COOLING time setting, adjust range:0-600.0 SEC
- "CCC.C":TIM 13, HOLDING 1 time setting, adjust range:0-99.9 SEC
- "DDD.D":TIM 14, HOLDING 2 time setting, adjust range:0-99.9 SEC
- "EEE.E":TIM 2 RECYCLE time setting, adjust range:0-99.p SEC
- "FFF.F":TIM 7, L. P. CLAMP ALARM time setting, adjust range:0-99.9 SEC
- "GGG.G":TIM 8, DELAY PLASTICISING setting, adjust range:0-99.9 SEC
- "HHH.H":TIM 10, CHANGE COLOR time setting (optional), adjust range:0-99.9 SEC
- "III.I":TIM 6, AUX. time setting, adjust range:0-99.9 SEC
- "JJJ.J":TIM 5, MELT DECOMPRES time setting, adjust range:0-99.9 SEC
- "KKK.K":TIM 3, CYCLE ALARM time setting, adjust range:0-600.0 SEC
- "LLL.L":TIM 18, AIR BLOW time setting, adjust range:0-99.9 SEC



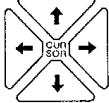




MENU (15):TIMERS & COUNTER

TIMERS & COUNTER			
PUMP START	AA. A	AUX	B. BB
AUX	CC. C	CLA. ALY	D. DD
ACC. ALARM	EE. E	EJT. DLY	F. FF
AUX	GG. G	DELAY 1	H. HH
ALARM T1	II. I	DELAY 2	J. JJ
ALARM T2	KK. K	AUX	L. LL
LIM. ALAR	MM. M	CNT. CHECK	N. NN

<PAGE 1>

TIMERS & COUNTER			
MOTOR OFF	O. OO		
CHANGE. CNT	PPPP		
???	???. ?	?????. ?mm	?????. ?

<PAGE 2>

1. Press down  +  , Menu (15) appears.
2. Press down  to select time setting, and enter data as desired, then press down "  " to end setting.
3. Press down  +  or  to change pages.

Where:

- "AA. A":TIM 34, MOTOR Y - Δ START TIMERS SETTING, ADJUST RANGE:0-99.9 SEC
- "B. BB":TIM 27, AUX. TIMERS SETTING, (OPTIONAL) ADJUST RANGE:0-9.99 SEC
- "CC. C":TIM 19, AUX. TIMERS SETTING, (OPTIIONAL)ADJUST RANGE:0-99.9 SEC
- "D, DD":TIM 28, IN AUTO STATE, CLAMP END DELAY TIME SETTING, ADJUST RANGE:0-9.99 SEC
- "EE, E":TIM 20, INSPECT ACCUMULATOR CHARGE ALARM TIME SETTING, ADJUST RANGE:0-99.9 SEC
- "F. FF":TIM 29, IN AUTO STATE, OPEN END DELAY EJT. ACTION TIME \ SETTING, ADJUST RANGE;0-9.99 SEC
- "GG. G":TIM 21, AUX. TIMERS SETTING, ADJUST RANGE:0-99.9 SEC
- "H. HH":TIM 30, DELAY 1 TIMERS SETTING, ADJUST RANGE:0-9.99 SEC
- "II, I":TIM 22, ALARM T1 TIMERS SETTING, ADJUST RANGE:0-99.9 SEC

"J.JJ":TIM 31, DELAY 2 TIMERS SETTING, ADJUST RANGE:0-9.99 SEC
"KK.K":TIM 23, ALARM T2 TIMERS SETTING, ADJUST RANGE:0-99.9 SEC
"L.LL":TIM 32, AUX. TIMERS & COUNTERS SETTING, ADJUST RANGE:0-9.99
SEC
"MM.M":TIM 24, INSPECT CARRIAGE FORWARD, EJECTOR ACTION STROKE ALARM
TIME SET ADJUST RANGE:0-99.9 SEC
"N.NN":TIM 36, INSPECT ADJ. MOTOR COUNT SIGNAL ALARM TIME, ADJUST
RANGE:0-9.99 SEC
"O.OO":TIM 35, MOTOR STOP TIMERS SETTING, ADJUST RANGE:0-9.99 SEC
"PPPP":CNT 7, AUTO CLEAR MATERIAL TUBE COUNTER SETTING (OPTIONAL)



MENU (16):MOLD THICKNESS

MOLD THICKNESS	
MATH. THK.	254.0mm
MOLD THK.	430.0mm


1. MANUAL OPENING TO END. POS., shut off SAFETY DOOR and press down



Menu (16) appears.

2. AUTO ADJ. MOLD THK.: Operation as follows:



Enter data 430.0 of MOLD THK. (430.0mm for instance) into MOLD THK.

POS., and press down  to adjust MOLD THK., if intend to stop

MOLD THK. ADJ., press down



3. MANUAL ADJ. MOLD THK.: Operation as follows:

Press down  to reduce MOLD size, if press down  MOLD size

will be increased, if intend to stop, release the buttons.

4. If desire to change present MOLD THK. (RETURN TO INITIAL), switch to Menu (23) for change.

MENU (17):I/O MONITOR

IO MONITOR ●:ON ○:OFF
 I00 REAR DOOR○ I07 UNSCR BAK○
 I01 FRONT DOO○ I08 CORE1 IN○
 I02 DOOR LOCK○ I09 CORE1 OUT○
 I03 HYD. LOCK○ I10 NOZ. GUARD○
 I04 MIN. THICK○ I11 PHOTOCCELL○
 I05 MAX. THICK○ I12 AUX○
 I06 UNSCR FOR○ I13 AUX○

<PAGE 1>

IO MONITOR ●:ON ○:OFF
 I14 AUX○ I21 AUX○
 I15 AUX○ I22 AUX○
 I16 AUX○ I23 EJT. ACKN.○
 I17 AUX○ I24 ACC. CHAR○
 I18 CORE2 IN○ I25 LUBE FUL○
 I19 CORE2 OUT○ I26 LUBE PRE○
 I20 AUX○ I27 THICK OL○

<PAGE 2>

IO MONITOR ●:ON ○:OFF
 I28 PUMP OL○ I35 PLASTIC○
 I29 OIL TEMP○ I36 DECOMPRES○
 I30 SCREW SP○ I37 NOZZ. BACK○
 I31 THICK SP○ I38 OPEN-CLAM○
 I32 FLOW - A○ I39 EJT. FORD○
 I33 NOZZ. FORD○ I40 EJT. BACK○
 I34 INJECT○ I41 BOOST○

<PAGE 3>

IO MONITOR ●:ON ○:OFF
 I42 CORE1 IN○ I49 DISCHARG○
 I43 CORE1 OUT○ I50 AIR BLOW○
 I44 UNSCR IN○ I51 BIG PUMP○
 I45 UNSR OUT○ I52 ACC. RELEF○
 I46 THICK IN○ I53 AUX○
 I47 THICK OUT○ I54 BLOW-OPEN○
 I48 CHARGE○ I55 AUX○

<PAGE 4>

IO MONITOR ●:ON ○:OFF
 I56 REJET. SIG○ I63 DOOR OUT○
 I57 AUTO GATE○ I64 CORE2 IN○
 I58 LUBE○ I65 CORE2 OUT○
 I59 ALARM○ I66 BACK PRE○
 I60 PUMP STAR○ I67 AUX○
 I61 PUMP RUN○ I68 INJECTED○
 I62 DOOR IN○ I69 ROBOT OK○

<PAGE 5>





IO MONITOR ●:ON ○:OFF		
170 ROBOT ON ○	177 CORE2 PUT ○	
171 TAKING ○	178 FILTER ○	
172 EJT. ACKN ○	179 AUX ○	
173 ROBOT. END ○	180 AUX ○	
174 DOOR IN ○	181 AUX ○	
175 DOOT OUT ○	182 AUX ○	
176 CORE2 IN ○	183 AUX ○	

<PAGE 6>

IO MONITOR ●:ON ○:OFF		
184 UNSCR. AUX ○		
185 HEATER ? ○		

<PAGE 7>

1. Press down  + , Menu (17) appears.

2. Press down  or  for page change.

MENU (18):STATUS OF RELAYS

```
STATUS OF RELAYS
R00000000 0000R01000000 00000
R02000000 0000R03000000 00000
R04000000 0000R05000000 00000
R06000000 0000R07000000 00000
R08000000 0000R09000000 00000
R10000000 0000R11000000 00000
R12000000 0000R13000000 00000
```

<PAGE 1>

```
STATUS OF RELAYS
R14000000 0000R15000000 00000
R16000000 0000R17000000 00000
R18000000 0000R19000000 00000
R20000000 0000R21000000 00000
R22000000 0000R23000000 00000
R24000000 0000R25000000 00000
```

<PAGE 2>



```
STATUS OF RELAYS
E00000000 0000E01000000 00000
E02000000 0000E03000000 00000
E04000000 0000E05000000 00000
E06000000 0000E07000000 00000
E08000000 0000E09000000 00000
E10000000 0000E11000000 00000
E12000000 0000E13000000 00000
```

<PAGE 3>

```
STATUS OF RELAYS
E14000000 0000E15000000 00000
E16000000 0000E17000000 00000
E18000000 0000E19000000 00000
E20000000 0000E21000000 00000
E22000000 0000E23000000 00000
E24000000 0000E25000000 00000
```

<PAGE 4>

1. Press down  +  , Menu (18) appears.

2. Press down  or  for page change.

MENU (19):TIMER' S STATUS

TIMER' S STATUS					
TIM	SET	NOW	TIM	SET	NOW
00	AA.	AA	BB.	BB	
01	EE.	EE	FF.	FF	
02	II.	II	JJ.	JJ	
03	MM.	MM	NN.	NN	
04	QQ.	QQ	RR.	RR	
???	???.	?	????.	?mm	????.

<PAGE 1>

TIMER' S STATUS					
TIM	SET	NOW	TIM	SET	NOW
10	AA.	AA	BB.	BB	
11	EE.	EE	FF.	FF	
12	II.	II	JJ.	JJ	
13	MM.	MM	NN.	NN	
14	QQ.	QQ	RR.	RR	
???	???.	?	????.	?mm	????.



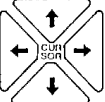




<PAGE 2>

TIMER' S STATUS					
TIM	SET	NOW	TIM	SET	NOW
20	AA.	AA	BB.	BB	
21	EE.	EE	FF.	FF	
22	II.	II	JJ.	JJ	
23	MM.	MM	NN.	NN	
24	QQ.	QQ	RR.	RR	
???	???.	?	????.	?mm	????.

<PAGE 3>

TIMER' S STATUS					
TIM	SET	NOW	TIM	SET	NOW
30	AA.	AA	BB.	BB	
31	EE.	EE	FF.	FF	
32	II.	II	JJ.	JJ	
33	MM.	MM	NN.	NN	
34	QQ.	QQ	RR.	RR	
???	???.	?	????.	?mm	????.

<PAGE 4>

1. Press down  +  , Menu (19) appears.
2. Press down  to select TIMER setting, and enter data desired and press down  to end setting.
3. Press down  +  or  for page change.
4. If Timer now is "*****", it means not yet used in program.



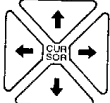




MENU (20):COUNTER' S STATUS

COUNTER' S STATUS					
CNT	SET	NOW	CNT	SET	NOW
00	AAAAA	BBBBB	05	CCCCC	DDDD
01	EEEE	FFFF	06	GGGG	HHHH
02	IIII	JJJJ	07	KKKK	LLLL
03	MMMM	NNNN	08	OOOO	PPPP
04	QQQQ	RRRR	09	SSSS	TTTT
???	???.?		????.	mm	????.

<PAGE 1>






COUNTER' S STATUS					
TIM	SET	NOW	CNT	SET	NOW
10	AAAAA	BBBBB	15	CCCCC	DDDD
11	EEEE	FFFF			
12	IIII	JJJJ			
13	MMMM	NNNN			
14	QQQQ	RRRR			
???	???.?		????.	mm	????.







<PAGE 2>

1. Press down  + , Menu (20) appears.
2. Press down  to select COUNTER setting, and enter data desired and press down  to end setting.
3. Press down  +  or  for page change.
4. If Counter now is "*****", it means not yet used in program.

MENU (21):MOLDS

MENU FOR MOLDS		
001 - CLEAR	006 - CLEAR	
002 - CLEAR	007 - CLEAR	
003 - CLEAR	008 - CLEAR	
004 - CLEAR	009 - CLEAR	
005 - CLEAR	010 - CLEAR	
MOLD NO. [AAA]	[BBBBBBBBBB]	
RPOG NO. [CCC]		

1. Press down , Menu (21) appears.
2. There are 1 - 150 sets of MLOD NO. in memory where,
 - "AAA":MOLD NO. on display
 - "BBBBBBBBBB":MOLD NO. notes
 - "CCC":Under AUTO mode, not available to alter MOLD NO.
3. Example: If intend to alter MOLD NO. 007-CLEAR into 007-TEST, the operation as follows:
 - (1) Move Cursor to MOLD NO. DISPLAY POS [AAA]. enter 007 and  to end setting, use  to move Cursor to [BBBBBBBBBB], enter Alphabets or codes from left to right, and use  moving to the last code and press down  to end MOLD NO.

Notes (enter TEST, press down  to end MOLD NO. RENAME).
 - * Continue to press down numerical button  will result in cyclic display 7→A→B→C→7, if enter Space Bar, number 3  must be entered four times, 3→Y→Z→_.
4. If intend to rename MOLD NO. 001 as 002, the operation as follows:
 - (1) Move Cursor to MOLD NO. RENAME POS. [CCC]. enter 002 and  and if confirm press down  if not sure press down .
 - (2) MOLD NO. has 1 - 150 sets memory, i. e. $1 \leq \text{MOLD NO.} \leq 150$.

MENU (22):SAVE \$ R MOLD

```
SAVE $ MOLD
MOLD: AAA COPY TO MOLD BBB
MOLD: CCC → DDD TO CARD EEE
CARD: FFF → GGG TO MOLD HHH
MOLD NAME: I I I I I I I I I I
CARD-CLEAR 010-CLEAR
MOLD NO. [AAA] [BBBBBBBBBB]
PROG NO. [CCC]
```

1. Press down  +  , Menu (22) appears.

Where:

"AAA":CONTROLLOR copy initial MOLD NO.

"BBB":CONTROLLOR copy to MOLD NO.

"CCC":CONTROLLOR copy initial MOLD NO.

"DDD":CONTROLLOR copy END MOLD NO.

"EEE":IC card copy to initial MOLD NO.

"FFF":IC card copy initial MOLD NO.

"GGG":IC card copy to initial MOLD NO.

"HHH":CONTROLLOR copy to initial MOLD NO.

"III":showing MOLD NAME

"JJ":STATISTICS DATA record interval time. If data record to STATISTICS ACRD, please match MENU(25) QUALITY STATUS setting.

2. Card must use "SMART CARD", otherwise it will appear alarm display "[USE CHEN HSONG SMART CARD]".

3. Card has two different types:(Optional)

(1)MOLD NO.: For MOLD NO. and PROG SAVE.


(2)STATISTICS: For CYCLES DATA SAVE.

These two formats can not be exchanged, otherwise it will appear "[PLEASE FORM THE MEMORY CARD]".

4. For initial use of Card or clear of all data on Card must perform a format work as follows:

Select a format for Card and move Cursor to MOLD NO. or




STATISTICS POS., press down  , then enter  to end FORMAT

if confirm, if not sure press down  to cancel.





5. Protect CARD data against clear, please turn SW on CARD to WP POS. for "Write Protected".

6. When data is saved on CARD while CARD SW not yet turned to WP POS. or if CARD not yet inserted, it will appear "[UNLOCK THE PROTECT SWITCH]".





7. If intend COPY MOLD 005 TO 010, operation as follows:

Move Cursor to MOLD NO.: AAA POS., enter 005 and press down 
move Cursor to DDD POS. and enter 010, press down  Menu
appears "?", then press down  to end 'COPY'.

8. If intend COPY MOLD 005-015 TO CARD 010--020, operation as follows:

Move Cursor to MOLD NO.: CCC POS., enter 005 and press down 
move Cursor to BBB POS. and enter 015,  move Cursor to
BBB POS., enter 010, press down  Menu appears "?", then
press down  to end 'COPY'. At the moment, data on CARD
010-020 is same as data on the computer 005-015.

9. If intend COPY CARD 010-020 TO MOLD 005-015, operation as follows:

Move Cursor to MOLD NO.: FFF POS., enter 010 and press down 
move Cursor to GGG POS. and enter 020,  move Cursor to
HHH POS., enter 005, press down  Menu appears "?", then
press down  to end 'COPY'. AT the moment, data on COMPUTER
005-015 is same as data on CARD 010-020.

10. CARD MOLD NO. DISPLAY: I I I I I I I I I I, showing MOLD NAME.

11. If intend to use CARD PROG., upon COMPUTER POWER ON, hold down



till MENU (21) appears, at the moment COMPUTER will run CARD

















PROG. Upon POWER OFF it will automatically revert to COMPUTER PROG.




* Do not remove CARD during MENU (22) operation.

* The aforesaid functions not available under AUTO MODE.



MENU (23):INITIAL DATA




INITIAL DATA			
ADJ. SPEED REDUCE BY AA%			
MOLD THICKNESS		BBB. Bmm	
RESET	CCC. C	DDDDP	EEE. E
MANU	FFF. F	GGGGP	HHH. H
???	???. ?	?????. ?	???. ?

1. Press down  + , Menu (23) appears.
2. ADJ. SPEED REDUCE BY AA%: During machine adjustment to reduce output speed by AA%, operation as follows:
 Move Cursor to AA POS., enter 50, press down  Menu appears "?", then press down  to end setting. Depress  +  key, then LED light will be flash.
 That indicated this function action.
3. MOLD THICKNESS BBB. Bmm: For MOLD THICKNESS ADJ., operation as follows:
 Move Cursor to BBB. B POS., enter 250.0, press down  Menu appears "?", then press down  to end setting, and at the moment present data of MOLD THICKNESS is 250.0MM.
4. RESET CCC. C DDDDP EEE. E: ENCODER RESET contains CCC. C that is EJECTOR RESET data, and DDD is CLAMPING RESET data, EEE. E is INJECT RESET data, the ENCODER RESET function enables to match PROG. operation. If change setting the operation as follows:
 - (1) Move Cursor to CCC. C POS., enter 100.5, press down  Menu appears "?", then press down  to end setting. At the moment EJECTOR Revert data is 100.5mm.
 - (2) CLAMPING, INJECT. operations as above mentioned.
 - (3) If Menu appears "[PLEASE RST THE CLAMP ORIGIN]", please use  to set MAX. STROKE and press down  +  to end RESET, and at the moment ENCODER present position is equivalent to RESET CLAMPING "DDDD".
 - (4) If Menu appears "[PLEASE RST THE EJECT ORIGIN]", use  to move back to MAX. POS., and press down  +  to end RESET. At the moment ENCODER present position is equivalent to RESET EJECT "CCC. C".

(5) If Menu appears "[PLEASE RST THE INJECT ORIGIN]", use  for setting to MAX. INJECTION POS., and press down  +  to end REVERT. At the moment ENCODER present position is equivalent to RESET INJECT "EEE. E".

5. MANUAL FFF.F GGGGP HHH.H: ENCODER MANUAL RESET contains FFF.F that is EJECTOR RESET data, and GGGG is CLAMPING RESET data, HHH.H is INJECT RESET data, the operation as follows:

(1) Move Cursor to FFF.F POS., enter 100.5, press down , Menu appears "?", then press down  to end setting. At the moment EJECTOR RESET data is 100.5mm.

(2) Move Cursor to FFF.F POS., press down  + , Menu appears "?", then press down  to end REVERT, and at the moment ENCODER present position is 100.5mm equivalent to EJECT RESET.

(3) CLAMPING, INJECT. operations same as above mentioned.

* MOLD NO. 1-99 are standard data modules, MOLD NO. 101-150 are easy operation.

NOTE:

- ① modules of which some data can not be changed. The data which can not be changed have no COPY function. Do not use MOLD NO. 100 which contain some data for MOLD NO. 101-150 not available for data change.
- ② If ENCODER RESET had been changed, can use MOLD NO. copy MOLD NO. 151 or MOLD NO. 152 initial data to another MOLD NO. that can search initial ENCODER setting.


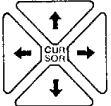








MENU (24) : FUNCTION

		FUNCTION ●:ON ○:OFF	
BOOST	206○	PHOTOCEL	210○
DECOMP	207○	EJT. HOLD	211○
ACC. INJ.	208○	AUX	212○
CLOD ST.	209○	AUX	213○
STOP MODE: NOT USE			

<PAGE 1>

		FUNCTION ●:ON ○:OFF	
AUX	90 ○	CHG. COLOR	95○
HYD. NOZ	91 ○	SPE. CLAMP	96○
AUX	92 ○	AUX	97○
INJ. ACCE	93 ○	RT NO USE	98○
PLT. ACCE	94 ○	LIM. ACKN	99○

<PAGE 2>








- Press down , Menu (24) appears.
- Press down  to select function desired, and press down  to select "ON" and press down  to select "OFF", and press down  to end setting.
- Press down  +  or  for page change.
- AUTO STOP: DISENABLED, use  or  to select the following four modes and match CYCLES and BATCH data:
 - NOT USE
 - STOP PUMP
 - STOP HEATER
 - PUMP+HEATER

FUNCTION STATUS

* BOOST	* PHOTO	* ACC. INJ	* LUBE
* AUTO STOP	* EJECT	* DECOMP	* ROBOT



MENU (25):QUALITY STATUS

QUALITY STATUS				
	TARGET	NOW	LAST1	LAST2
CYC NO.		???	???	???
TIME	??.	???	???	???
CUSH	??.	???	???	???
INJECT	??.	???	???	???
PLAST	??.	???	???	???
???	???.?	????	????	????

1. Press down  , Menu (25) appears.
2. Move Cursor to "TARGET", press down  or  for setting switchover standard and deviation.
3. CYC NO: Present cycles of formation record .
 TIME: FORMATION TIME OF CYCLES.
 CUSH: INJECT. END. POS. FOR PRESENT CYCLES.
 INJECT: INJECT 1 TO INJECT 3 END TIME OF PRESENT CYCLES.
 PLAST: PLASTICIZING TIME OF PRESENT CYCLES.
4. Move Cursor to "TARGET", press down  Menu appears "?", then press down  to make "NOW" data as the product forming condition "TARGET". (note: this time the product must be good)
5. Move Cursor to "DEVIA". for time change, INJECT END.
 POS. change, INJECT and PLAST change in deviation, if.
 exceeding deviation, Menu Will appear [ALARM IMAGE] and indicate this time product is rejected.
6. Move Cursor to "LAST2", press down  or  as the average of LAST2 for setting switchover.
7. The aforesaid data can be saved on such IC CARD (OPTIONAL) under STATISTICAL MODE of card.

MENU (26):PRESSURE SETTING (OPTIONAL)







PRESSURE SETTING	
LOCKING	110Kg/cm2
HOLDING	120Kg/cm2



1. Press down  + , Menu (26) appears.
2. If LOCKING or HOLDING pressure bigger than setting data, H. PRE ALARM will be signal out.





MENU (27):PROGRAM LIST

PROGRAM LIST					
0001	LOD	009	○	-	-
0002	OR	001	○	-	-
0003	ANDN	000	○	-	-
0004	OUT	110	○	-	-
0005	TIM	000	○	- 2.00	- 0.00
0006	CNT	001	○	- 2-	0
R110	E000	T00	C10	[AAAA]

1. Press down  +  , Menu (27) appears.
2. Press down  PROG moves up 1 line; press down  PROG. moves down 1 line.
3. Press down  , PROG moves up 6 lines; press down  PROG. moves down 6 lines.

4. Press down  +  to search PROG output items

R100	→	E000	→	T00	→	C00	cyclic switchover
↑		↓		↓		↓	






 Press down  + 
 may search PROG. output items

R100	←	E000	←	T00	←	C00	cyclic switchover
↑		↓		↓		↓	

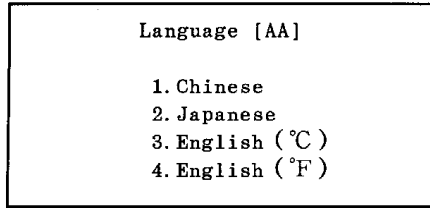
Where:



- R100: INTERNAL RELAY R110
- E000: INTERNAL RELAY E000
- T00: INTERNAL TIMER TIM00
- C01: INTERNAL COUNTER CNT01

Enter search number to display PROG. present position.

5. When select T00 or C10, except for data list, may change data setting. For instance, change T01 setting 1.0 sec into 3.5 sec, the operation as follows:
 Move Cursor to T00 POS., enter 01, press down  , Menu appear
 PROG. present position and setting data. Press down  +  ,
 Cursor moving to change setting data [AAAAA], enter 3.5, press down  Menu appears "?", then press down  to confirm and end data change.

MENU (28):LANGUAGE



1. During POWER ON AND SYSTEM SELF-TEST, when Menu (01) appears, press down  +  Menu (28) appears.

2. Enter language No. as desired into language [AA] pos. to change language display.




for instance, if intend to use Chinese diaplay, then enter 1 into [AA] pos., and operating Menu displays in Chinese.

*°C and °F can not be switched over at random.



MENU (29):CLEAR MEMORY DATA

```
[[[ CDC 88 ]]]  
Ver:3.0  
date 1993-03-01  
time 18:05:30  
SUM1=E8EF SUM2=D654  
RAM all clear  
→ push return key!!
```

1. Press down and hold on  +  the start POWER ON till Menu (29) appears.
 2. If make sure all clear, then press down  and Menu automatically switches to (00) to end all clear.
- *RAM clear will clear all data stored in RAM so be careful to confirm once again before the use of this function!

MENU (30):AUX SPEED AND PRESSURE SETTINGS
 (DO NOT MAKE ANY CHANGE OF DATA ON THIS PAGE)

	I/R	SP.	PR.
UNSCREW 3	E62	AA%	BB%
HYD. NOZZLE	E63	CC%	DD%
ACC. CHARGE	E64	EE%	FF%
HYD. CLAMP	E65	GG%	HH%
NUT IN/OUT	E66	II%	JJ%
SP. LPC	E67	KK%	LL%
???	???.?	????.?mm	????.?

<PAGE 1>

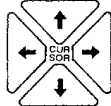
	I/R	SP.	PR.
AUX 1	E68	MM%	NN%
AUX 2	E69	OO%	PP%
AUX 3	E70	QQ%	RR%
RST ORIGIN	E71	SS%	TT%
EJE. STOP	E72	UU%	VV%
ADJ. FORW	E74	WW%	XX%
???	???.?	????.?mm	????.?


<PAGE 2>




	I/R	SP.	PR.
ADJ. BACK	E75	YY%	ZZ%
UNSCREW 2	E76	aa%	bb%
RAMP 1	E220	cc%	dd%
RAMP 2	E221	ee%	ff%
RAMP 3	E222	gg%	hh%
RAMP 4	E223	ii%	jj%
???	???.?	????.?mm	????.?

<PAGE 3>

1. Press down  +  , Menu (30) appears.

2. Press down  to select SETTING TIME, and enter data as

desired, then press down "  " to end setting.

3. Press down  +  or  to change pages.

Where:

- "AA": UNSCREW 3 speed adjustment
- "BB": UNSCREW 3 pressure adjustment
- "CC":HYD. NOZZLE speed adjustment
- "DD":HYD. NOZZLE pressure adjustment
- "EE":ACC. CHARGE speed adjustment
- "FF":ACC. CHARGE pressure adjustment
- "GG":HYD. CLAMP speed adjustment
- "HH":HYD. CLAMP pressure adjustment

"II": NUT IN/OUT speed adjustment
 "JJ": NUT IN/OUT pressure adjustment
 "KK": SP. LPC speed adjustment
 "LL": SP. LPC pressure adjustment
 "MM": AUX 1 speed adjustment
 "NN": AUX 1 pressure adjustment
 "OO": AUX 2 speed adjustment
 "PP": AUX 2 pressure adjustment
 "QQ": AUX 3 speed adjustment
 "RR": AUX 3 pressure adjustment
 "SS": ENCODER RESET ORIGIN initial data calibration speed adjust
 "TT": ENCODER RESET ORIGIN initial data calibration pressure adjust
 "UU": EJE. STOP speed adjustment
 "VV": EJE. STOP pressure adjustment
 "WW": MOLD FORW speed adjustment
 "XX": MOLD FORW PRE. adjustment
 "YY": MOLD BACK speed adjustment
 "ZZ": MOLD BACK PRE. adjustment
 "aa": UNSCREW 2 speed adjustment
 "bb": UNSCREW 2 PRE. adjustment
 "cc": RAMP 1 speed ratio setting $EE = (100/Re)*10,$
 $Re>0msec, Re<1000msec'$
 "dd": RAMP 1 PRE. ratio setting $FF = (100/Rf)*10,$
 $Rf>0msec, Rf<1000msec'$
 "ee": RAMP 2 speed ratio setting $GG = (100/Rg)*10,$
 $Rg>0msec, Rg<1000msec'$
 "ff": RAMP 2 PRE. ratio setting $HH = (100/Rh)*10,$
 $Rh>0msec, Rh<1000msec'$
 "gg": RAMP 3 speed ratio setting $II = (100/Ri)*10,$
 $Ri>0msec, Ri<1000msec'$
 "hh": RAMP 3 PRE. ratio setting $JJ = (100/Rj)*10'$
 $Rj>0msec, Rj<1000msec'$
 "ii": RAMP 4 speed ratio setting $KK = (100/Rk)*10,$
 $Rk>0msec, Rk<1000msec,$
 "jj": RAMP 4 PRE. ratio setting $LL = (100/Rl)*10,$
 $Rl>0msec, Rl<1000msec'$

CHAPTER 3 FORMATION OPERATING INSTRUCTIONS

3-1 TEMP. CONTROL

When POWER ON, TEMP. display appears, refer to MENU (01).

"▲" symbol on MENU represents HEATER ON and TEMP.

CONTROL LED list up.

(1) TEMP. SETTING:

TEMP. 1 setting, press down whitening CURSOR appears on T1 POS. of MENU, enter data as desired, then press down to enter data into COMPUTER, and CURSOR skips to next TEMP. setting; if intend to stop TEMP setting, press down KEY to remove CURSOR.

TEMP. 2 setting, press down and the rest same as above mentioned.

TEMP. 3 setting, press down and the rest same as above mentioned.

TEMP. 4 setting, press down and the rest same as above mentioned.

TEMP. 5 setting, press down and the rest same as above mentioned.

TEMP. 6 setting, press down and the rest same as above mentioned.

Where TEMP. 5 and 6 SETTING is only available subject to tonnage of machine or customer's need.

(2) NOZZLE TEMP. HOLDING:

NOZZLE TEMP. HOLDING is provided for thermostate control to meet requirement of material tube NOZZLE, data setting ranges 00% - 99%. When setting 99%, COMPUTER internal thermostate relates to 25 sec full range heating, i.e. thermostate control is subjected to each cycle of 25 sec.

For instance: NOZZLE HOLDING setting at 20%

$25 \times 20\% = 5\text{sec.}$ NOZZLE HOLDING HEATER "ON"

$25 - 5 = 20\text{sec.}$ NOZZLE HOLDING HEATER "OFF"

(3) When some TEMP. control not use, setting data is 0.

3-2 TEMP. DEVIATION (ALARM SETTING)

TEMP. DEVIATION has H/L TEMP. setting, refer to MENU (13) When exceeding DEVIATION data, MENU will appear H.TEMP or L.TEMP. alarm.

H.TEMP. DEVIATION DATA + 20°C + 99°C.

L.TEMP. DEVIATION DATA - 10°C - 30°C.

3-3 TEMP. HOLDING FUNCTION:

TEMP. HOLDING FUNCTION, refer to MENU (13).

TEMP. HOLDING is to define TEMP. % for each TEMP. data reduction.


For instance: setting a 20%, and TEMP. data is 250°C


$$250^{\circ}\text{C} \times 20\% = 50^{\circ}\text{C}$$


$$250^{\circ}\text{C} - 50^{\circ}\text{C} = 200^{\circ}\text{C}$$

At the moment when TEMP. reduces to 200°C, TEMP. HOLDING ENABLES.

3-4 AUTO, SEMIAUTO, MANUAL

(1) During MANUAL operation, press down  , when POWER ON, COMPUTER will be in MANUAL MODE: if intend to return to MANUALE MENU or RESET MENU after having entered other conditions, press down this KEY again.

(2) During SEMIAUTO operation, press down  , COMPUTER will be in SEMTAUTO MODE. The front safety door may allow to be open/close to confirm the next cycle. Please note, rear safety door is open, PUMP power supply will be cut off automatically.

(3) During AUTO operation, press down  key, MACHINE will be in AUTO operation. MACHINE will follow selection preset by the operator to use RECYCLE TIME or PHOTO or ROBOT REVERT to confirm next cycle action.




*The aforesaid three modes, only one of them can be selected and before selection all formation conditions must be set. In addition, each action of cycle must be confirmed to have met the requirement first. If any of the three keys LED appears flashing on/off, it represents COMPUTER DATA have been LOCKED not permitted for change. LOCK method, please consult with your specialized personnel.

3-5 POSITION, SPEED, PRESSURE DATA SETTING

(1) Use FORMATION CONDITIONS KEY directly to select the key desired.

When the key desired is pressed down, Menu appears necessary image (refer to CHAPTER 2 MENU OPERATION) for setting or change.

(2) Position data setting contains ENCODER parameter (P) and Stroke data (mm), after stroke setting, COMPUTER may compute ENCODER data.



(3) When Menu remains on necessary image, operator not intend to change or set data, may press down  or  or  to return to normal Menu. If failing to press down any of three KEYS within 60 sec., it will return to normal Menu automatically.

*Change or setting data can only be achieved in MANUAL operation.

In AUTO or SEMIAUTO operation, data list is permitted only.

3-6 FORMATION CONDITION DATA SETTING

For formation conditions, ENCODER parameter, position stroke, speed, pressure, timer and counter may be entered by moving CURSOR to the position desired for change.

If wrong data is entered, Menu will appear alarm and list reference data, at the moment please press down  for data change. For numerical keys, some of them are double functioning, when intend to use, press down directly is to enter data If press down  + numerical key, it means to the function on numerical key. Refer to CHAPTER 2 MENU OPERATING INSTRUCTIONS.

3-7 COMPUTER INTERNAL COUNTERS

NO.	FUNCTION	DESCRIPTION
C00	EJE. CYCLES	EJE. CYCLES may set by FORWARD or "0"
C01	CYCLE	CYCLE NO.
C02	UNSCREW 1	SPECIAL CONDITION, UNSCREW TOTAL CYCLES
C03	UNSCREW 2	SPECIAL CONDITION, UNSCREW FAST CYCLES
C04	REJECT	INJECT. SHORT, INJECT. TIME UNUSUAL, FORMATION CYCLES
C05	BATCH	CYCLES/BATCH
C06	EJE. VIBRATION	EJE. VIBRATIONS, EJE. IN/OUT CYCLES, SET BY "0" WHEN NOT USE
C07	CHANGE COLOR	CLEAN MATERIAL TUBE, ACTION CYCLES
C08	AUX	
C09	PRO. TIME	TOTAL PRODUCTION TIME, 0.1 HR/UNIT.
C10	LUBE	CYCLES OF LUBRICATION
C11	UP/DOWN	ADJ. MOLD THICKNESS IN AUTO, 0.1 MM/UNIT
C12	AUX	
C13	AUX	
C14	AUX	
C15	AAUX	

3-8 COMPUTER INTERNAL TIMERS

NO.	FUNCTION	DESCRIPTION
T00	INJ. TIME	TOTAL INJ. TIME, HOLDING TIME EXCLUDED
T01	COOL TIME	TIME FROM INJECT. TO HOLDING AND BEFORE OPENING
T02	RECYCLE	AUTO MODE, CYCLE FROM EJE. ENDING TO START CLAMPING OF THE NEXT
T03	PERIOD ALARM	PERIOD OF ALARM
T04	EJE. STOP	EJE. STOP IN AND OUT.
T05	DECOMP	FIRST DECOMPRE ACTION THEN PLASTIC, DECOMP. STROKE SETTING
T06	AUX	
T07	L. P. ALARM	ALLOWABLE TIME FROM LOW PRE. CLAMPING TO HIGH PRE. CLAMPING
T08	DELAY	DELAY FROM END OF INJECT., HOLDING TO PLASTICIZING
T09	NOZ. BACK	NOZZLE BACK STROKE TIME
T10	COLOR CHANGE	CLEAN MATERIAL TUBE, PLASTIC STROKE SETTING
T11	PUSH CORE 1	PUSH CORE TIME
T12	PULL CORE 1	PULL CORE TIME
T13	HOLDING 1	HOLDING 1 TIME
T14	HOLDING 2	HOLDING 2 TIME
T15	UNSCREW OUT	UNSCREW OUT TIME
T16	UNSCREW IN	UNSCREW IN TIME
T17	NOZ. FAST	NOLLZE FAST FORW. TIME

NO.	FUNCTION	DESCRIPTION
T18	AIR BLOW	OPENING ENDING, AIR BLOW TIME
T19	SPARE	
T20	CHARGE	ACCUMULATOR CHARGE TIME
T21	SPARE	
T22	ALARM STOP	ALARM STOP TIME
T23	ALARM PERIOD	ALARM PERIODIC TIME
T24	LIMIT ALARM	LIMITER CHECK TIME, EJE. FORW. EJE. BACK
T25	LUBE	AUTO LUBRICATION, OIL PUMP ON
T26	LUBE ALARM	L. LUBE ALARM PERIOD, T23 AS ALARM PERIODIC TIME
T27	OPEN-BLOW	BEFORE OPENING, AIR BLOW TIME
T28	DELAY	AUTO LOCKING DELAY
T29	EJE. DELAY	AUTO OPENING DELAY FOR EJE. VALVE ACTION TIMER
T30	DELAY 1	VALVE SWITCHOVER DELAY TIME
T31	DELAY 2	AUX
T32	SPARE	
T33	6 MIN. TIM	6-MINUTE TIMER (360.0SEC)
T34	MOTOR START	MOTOR Y-△ SWITCH TIME
T35	MOTOR OFF	MOTOR SHUT DOWN TIME
T36	COUNT CHECK	ADJ. MOLD COUNT SIGNAL CHECK TIME

CHAPTER 4 ALARM MENU DESCRIPTION

NO.	ALARM DISPLAY	DESCRIPTION
E121 (COM)	COMPUTER BATTERY LOW	PLEASE COMMUNICATE WITH SERVICES
E122	AUX	
E123	AUX	
E124 (OPT)	ELECTRIC BOX NOT CLOSE	
E125 (COM)	EJECTOR BACK STROKE ERROR	EJECTOR BACKWARD MOTION INCORRECT
E126 (COM)	CHECK HEATER THERMOCOUPLES	THERMOCOUPLES BAD OR HEATER CAN' T HEATING TEMP. OVER 60°C
E127 (COM)	BARREL OVER TEMPERATURE	BARREL TEMP. OVER SETTING DEVICATION PLEASE SEE CHARP2 MENU (13)
E128 (COM)	BARRED LOW TEMPERATURE	BARRLE TEMP. LOW SETTING DEVICATION PLEASE SEE CHARP2 MENU (13)
E129 (COM)	BARREL IN PREHEATING	BARREL NOW IN PREHEATING STATE PLEASE SEE CHARP2 MENU (13)
E130	AUX	
E131	CLAMP FORCE OVER SETTING	
E132 (COP)	BIG CYLINDER OVER STROKE	BIG CYLINDER MOTION IS ALREADY OVER MAX. STROKE POSITION
E133 (CRA)	LUBRICATION OIL LOW	LUBRICATION OIL LEVEL TOO LOW (INPUT 25)
E134	CLAMPING STROKE NOT END	
E135	REPAIRING !DON' T START MOTOR	
E136 (COM)	ADJUST MOTOR OVERLOAD	ADJ. MOLD MOTOR OVERLOAD. PLEASE RESET OVERLOAD TH-RY1. (INPUT 27)
E137 (COM)	REAR SAFE DOOR NOT CLOSE	REAR SAFE DOOR NOT YET CLOSE OR LIMIT SWITCH BAD (INPUT 1)
E138 (COM)	FRONT SAFE DOOR NOT CLOSE	FRONT SAFE DOOR NOT YET CLOSE OR LIMIT SWITCH BAD (INPUT 0)

NO.	ALARM DISPLAY	DESCRIPTION
E139 (COM)	EJE. BACK LIMIT SWITCH ERROR	EJECTOR BACKWARD OR POSITIONING LIMIT SW NO TOUCH (INPUT 23)
E140 (COM)	ADJ. MOLD OVER MIM. THICKNESS	OVER MIN. MOLD THICKNESS (INPUT 4)
E141 (COM)	ADJ. MOLD OVER MAX. THICKNESS	OVER MAX. MOLD THICKNESS (INPUT 5)
E142 (COM)	ADJ. MOLD COUNT SWITCH ERROR	PLEASE CHECK ADJ. MOLD COUNT SIGNAL OR TIMER 36 SETTING (INPUT 31)
E143 (COM)	ADJ. MOLD THICK- NESS IN AUTO	AUTOMATIC ADJ. MOLD THICKNESS PLEASE SEE CHARP2 MENU (16)
E144	AUX	
E145 (OPT)	HYDRAULIC OIL LEVEL LOW	
E146 (COM)	RESET BY POWER OFF	AFTER AUTO STOP PUMP/HEATER, PLEASE REPEAT COMPUTER POWER OFF-ON
E147 (COM)	PUMP MOTOR OVERLOAD	PUMP MOTOR OVERLOAD. PLEASE RESET TH-RY2 OVERLOAD (INPUT 28)
E148	PUMP MOTOR NOT RUNNING	PUMP MOTOR START NOT YET IN RUNNING OK.
E149 (OPT)	OIL FITTER CLOGGED	
E150 (OPT)	OIL TEMPERATURE TOO LOW	
E151 (COM)	OIL TEMPERATURE TOO HIGH	HYDRAULIC OIL TEMP. OVER SETTING (INPUT 29)
E152	AUX	
E153 (COP)	NUT LIMIT SWITCH ERROR	NUT OR HYDRALIC CLAMP MOTION NOT END IN CHECK TIME SETTING
E154 (OPT)	LUBRICATION CIRCUIT LEAKAGE	
E155	UNSCREW LIMIT SWITCH ERROR	
E156	CHECK CHANGE MO- LD LIMIT SWITCH	

NO.	ALARM DISPLAY	DESCRIPTION
E157 (OPT)	BIG CYLINDER TRAVEL ERROR	BIG CYLINDER TRAVEL MOTION NOT END IN CHECK TIME SETTING
E158 (OPT)	CHECK MOLD MOUNTING	
E159 (OPT)	CHECK HYDRAULIC CLAMPING ERROR	
E160	CHECK CLAMP STROKE ERROR.	
E161	CHECK CLAMPING END LIMIT SW.	
E162 (COM)	CHECK CORE LIMIT SWITCH	CORE IN CHECK TIME:TIM 11, SWITCH:INPUT 9 CORE OUT CHECK TIME:TIM12, SWITCH:INPUT 8
E163 (COP)	CHECK TURN TABLE LIMIT SWITCH	TURN TABLE MOTION NOT END IN CHECK TIME SETTING.
E164 (OPT)	CHECK PNEUMATIC SAFETY VALVE	
E165 (COM)	ROBOT POSITION ERROR	ROBOT NOT YET RISE POSITIONING. PLEASE CHECK ROBOT (INPUT 71)
E166 (COM)	ROBOT TAKE OUT ERROR	ROBOT TAKE OUT PRODUCT MOTION ERROR. PLEASE CHECK POBOT (INPUT 73)
E167 (CRA)	PRODUCT ACKN. SIGNAL ERROR	PRODUCT NOT FALL. IN MANU, TAKE OFF THE PRODUCT (INPUT 15)
E168 (CRA)	CLEAN PHOTOCCELL PATH.	PLEASE CLEAN PHOTOCCELL PATH PRODUCT OR OBSTRUCT (INPUT 15)
E169 (COM)	CLAMP MOLD IS ALREADY END	
E170 (COM)	OPEN MOLD IS ALREADY END	
E171 (COM)	OPEN MOLD IS NOT YET END	
E172 (COM)	EJECTOR FORWARD IS ALREADY END	
E173 (COM)	EJECT BACKWARD IS ALREADY END	
E174	PLASTICISING IS END	

NO.	ALARM DISPLAY	DESCRIPTION
E175	MELT DECOMPRESS- ION IS END	
E176 (COM)	CHECK NOZZLE FO- RWARD LIMIT SW.	NOZZLE FORWARD MOTION NOT END IN CHECK TIME SETTING. PLEASE CHECK LIMIT SWITCH
E177	PURGE GUARD NOT CLOSE	
E178 (COM)	NOZZLE IS CLOGGED	INJECT MOTION NOT REACH INJ. 2 SEGMENT OR NOZZLE IS CLOGGED. SEE CHARP2 MENU(7)
E179 (COM)	NOT ENOUGH MATE- RICAL OR LEAKED	PLEASE ADJUST INJECTION LEAKAGE OR PLAS- TIC END POSITION. SEE CHARP2 MENU(7) & (9)
E180 (COM)	CHECK SAFE DOOR DEVICE ERROR	SAFE DOOR AUX. CONTACT (INPUT 2) SIGNAL ERROR
E181 (OPT)	PRESSURE SENSOR ERROR	
E182	CHECK SCREW SPEED SWITCH	
E183 (OPT)	AUTOMATIC PURGING	
E184 (COM)	NO MATERIAL OR HOPPER CLOGGED	PLASTICIZING MOTION TIME OVER COOL TIME SETTING. PLEASE SEE CHARP2 MENU(7) & (9)
E185 (COM)	PRODUCTION REAC- HED THE TARGET	IN MANU, PRESS "C/." RESET COUNT PLEASE SEE CHARP2 MENU(12)
E186 (OPT)	CHECK REJECT PRODUCT TOO MUCH	REJECTED PRODUCT IS ALREADY REACHED SET- TING. IN MANU, PRESS "C/.", RESET COUNT
E187 (COM)	CYCLE TIME TOO LONG	ONE CYCLE MOTION TIME OVER CYCLE ALARM TIME SETTING. PLEASE SEE CHARP2 MENU(14)
E188 (OPT)	BIG CYLINDER POSITION ERROR	
E189 (COP)	OPEN DECOMPRESS- ION ERROR	
E190	MAINTAIN LUBRICATION OIL	
E191 (COM)	CLEAN MOLD OR ADJUST LPC DATA!	PLEASE CLEAN MOLD OBSTRUCT OR CHECK LOW PRESSURE CLAMP ALARM SETTING TIME
E192 (OPT)	ACCUMULATOR CHARGE ERROR	ACCUMULATOR CHARGE MOTION NOT END IN CHECK TIME SETTING.

NO.	ALARM DISPLAY	DESCRIPTION
E193	CHECK UNSCREW LIMIT SWITCH	
E194 (OPT)	CHANGE MOLD IN AUTO	
E195	AUX	
E196	AUX	
E197	AUX	
E198 (COM)	EJE. FORWARD STROKE ERROR	EJECT FORWARD MOTION NOT END IN CHECK TIME SETTING.
E199	REPEAT START SAFE DOOR	IN SEMI, REPEAT OPEN-CLOSE SAFE DOOR ONE TIME, THAT CAN RESTART ANOTHER ONE CYCLE
E200	AUX	
E201 (COM)	OVER MOLD THICKNESS LIMIT	OVER MOLD SETTING THICKNESS LIMIT PLEASE SEE CHARP2 MENU(16) AND MENU(23)
E202 (COM)	USE CHEN HSONG SMART CARD	FORMAT WRONG OR NO INSERT SMART CARD PLEASE SEE CHARP2 MENU(22)
E203 (COM)	PLEASE RST THE CLAMP ORIGIN	PLEASE SEE CHARP2 MENU(23)
E204 (COM)	PLEASE RST THE INJECT ORIGIN	PLEASE SEE CHARP2 MENU(23)
E205 (COM)	PLEASE RST THE INJECT ORIGIN	PLEASE SEE CHARP2 MENU(23)
E206 (COM)	THERMOCOUPLES BROKEN	THERMOCOUPLES BAD OR HEATER CAN' T HEATING TEMP. OVER 60°C
E207 (COM)	UNLOCK THE PROTECT CWITCH	SMART CARD PROTECT SWITCH IS LOCK PLEASE SEE CHARP2 MENU(22)

CHAPTER 5 COMPUTER I / O POINT SIGNALS

NO.	FUNCTION	DESCRIPTION
I00	INPUT END	FRONT SAFETY DOOR
I01	INPUT END	REAR SAFETY DOOR
I02	INPUT END	SAFETY DOOR LIMIT
I03	INPUT END	NOZZLE FRONT LIMIT
I04	INPUT END	ADJ. MOLD FORWARD. LIMIT
I05	INPUT END	ADJ. MOLD BACKWARD. LIMIT
I06	INPUT END	UNSCREW IN. (Optional)
I07	INPUT END	UNSCREW OUT (Optional)
I08	INPUT END	PULL CORE 1
I09	INPUT END	PUSH CORE 1
I10	INPUT END	PURGE GUARD (Optional)
I11	INPUT END	PHOTOCELL
I12	INPUT END	SPARE
I13	INPUT END	SPARE
I14	INPUT END	SPARE
I15	INPUT END	SPARE
I16	INPUT END	SPARE
I17	INPUT END	SPARE

NO.	FUNCTION	DESCRIPTION
I18	INPUT END	SPARE
I19	INPUT END	SPARE
I20	INPUT END	SPARE
I21	INPUT END	SPARE
I22	INPUT END	SPARE
I23	INPUT END	EJECTOR BACKWARD ACKN.
I24	INPUT END	ACC. CHARGE (Optional)
I25	INPUT END	LUBRICANT LEVEL
I26	INPUT END	LUBRICANT PRESSURE (Optional)
I27	INPUT END	ADJ. MOLD OVERLOAD
I28	INPUT END	OIL PUMP OVERLOAD
I29	INPUT END	OIL TEMP. OVER ALARM
I30	INPUT END	UNSCRES SPEED COUNT
I31	INPUT END	ADJ. MOLD COUNT
O32	OUTPUT END	SPEED VALVE - A
O33	OUTPUT END	CARREIAGE ADVANCE VALVE.
O34	OUTPUT END	INJECTION VALVE.
O35	OUTPUT END	PLASTICIZING VALVE.

NO.	FUNCTION	DESCRIPTION
036	OUTPUT END	MELT DECOMPRES VALVE.
037	OUTPUT END	CARRIAGE RETURN VALVE.
038	OUTPUT END	OPENING-CLAMPING MOLD VALVE.
039	OUTPUT END	EJECTOR FORWARD VALVE.
040	OUTPUT END	EJECTOR BACKWARD VALVE.
041	OUTPUT END	BOOST VALVE.
042	OUTPUT END	PUSH CORE 1 VALVE.
043	OUTPUT END	PULL CORE 1 VALVE.
044	OUTPUT END	UNSCREW IN VALVE. (Optional)
045	OUTPUT END	UNSCREW OUT VALVE. (Optional)
046	OUTPUT END	ADJ. MOLD FORWARD.
047	OUTPUT END	ADJ. MOLD BACKWARD.
048	OUTPUT END	ACC. CHARGE VALVE. (Optional)
049	OUTPUT END	ACC. DISCHARGE VALVE. (Optional)
050	OUTPUT END	AIR BLOW
051	OUTPUT END	EXTRA FLOW VALVE. (Optional)
052	OUTPUT END	ACC. RELEASE VALVE. (Optional)
053	OUTPUT END	SPARE

NO.	FUNCTION	DESCRIPTION
054	OUTPUT END	SPARE
055	OUTPUT END	OPENING-PLASTIC VALVE. (Optional)
056	OUTPUT END	REJECT SIGNAL (Optional)
057	OUTPUT END	AUTO GATE (Optional)
058	OUTPUT END	LUBRICATION
059	OUTPUT END	ALARM
060	OUTPUT END	OIL PUMP START
061	OUTPUT END	OIL PUMP OPERATION
062	OUTPUT EXTEND	SAFETY DOOR FRONT
063	OUTPUT EXTEND	SAFETY DOOR REAR
064	OUTPUT EXTEND	PUSH CORE 2
065	OUTPUT EXTEND	PULL CORE 2
066	OUTPUT EXTEND	BACK PRESSURE
067	OUTPUT EXTEND	AUX 2
068	OUTPUT EXTEND	INJECTED
069	OUTPUT EXTEND	REMOVABLE
070	OUTPUT EXTEND	TAKING BY MACHINE
071	OUTPUT EXTEND	TAKING

NO.	FUNCTION	DESCRIPTION
I72	INPUT EXTEND	EJE. OUT
I73	INPUT EXTEND	TAKING CONFIRM
I74	INPUT EXTEND	SAFETY DOOR FRONT
I75	INPUT EXTEND	SAFETY DOOR REAR
I76	INPUT EXTEND	PUSH CORE 2
I77	INPUT EXTEND	PULL CORE 2
I78	INPUT EXTEND	FILTER CORE CHOKE
I79	INPUT EXTEND	AUX 3
I80	INPUT EXTEND	AUX 4
I81	INPUT EXTEND	AUX 5
I82	INPUT EXTEND	AUX 6
I83	INPUT EXTEND	AUX 7
I84	INPUT EXTEND	AUX 8
I85	INPUT EXTEND	HEATER FAILURE

CHAPTER 6 DESCRIPTION OF OPTIONAL FUNCTIONS

1. IC CARD:

- (1) IC CARD can be used for SAVE & READ PROG. and data for CYCLES.
- (2) IC CARD can be used for PROG. management and other purposes. When a plural units of same function in use, IC CARD may allow to change action procedure.
- (3) Data on IC CARD can be read through IBM PC to facilitate formation data management.
- (4) Operational method, refer to CHAPTER 2 MENU (22)

2. Operating pressure data display:

The function must have Pressure Sensor to display various operation pressures of formation at Pressure Pos. on left bottom corner of LCD, to help observe pressure variation on each stage.

3. CLAMPING Force Menu:

Match Kolin Column extension to display CLAMPING force during H.P. locking, to help forming condition setting.

4. Injection Choke Auto Holding:

- (1) Use within injection period, inject. actions not finished will automatically be switched to holding and giving alarm signal to avoid forming delay and as inspection signal for reject to control quality.
- (2) Operating type is easy by setting AUTO HOLDING as shown on CHAPTER 2 MENU (8).

5. Product, Reject AUTO Sorting, Signal Output:

Upon the end of each cycle, inspect period time, injection max. pos., injection time, to check product and reject, and may serve to give alarm for quality assurance.

6. Inject, Close-Loop Control System:

- (1) The function must have Optional Function 2 added.
With Pressure Sensor, upon HOLDING it may compensate and correct pressure loss anytime to ensure HOLDING fixed data and increase product consistency.
- (2) Operating type is easy by setting CLOSE-LOOP as shown on CHAPTER 2 MENU (8).

7. Vibration Eje., Eje. Back Speed/Pressure Adjustable:

When use vibration eje., ejec. back pos., speed and pressure are adjustable, without need of return to max. point but may have second eje. to save vibration eje. time.

8. Opening Eje:

Match oil loop modification to use for saving cycles time.

9. Opening Plastic.:

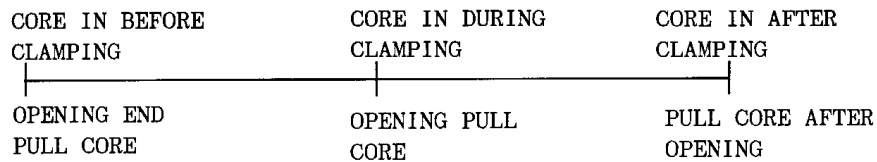
Match oil loop modification to use for saving cycles time.

10. AUTO Clean Tube

For change of plasticizing material, it may clean the tube in manual form. The function may achieve AUTO cleaning by setting cleaning cycles.

11. Pull Core Function;

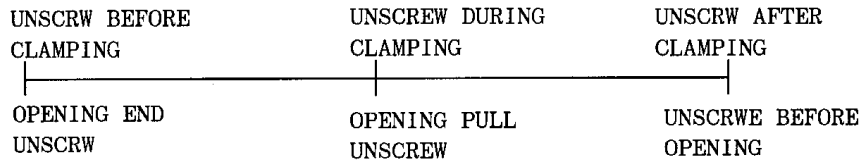
Pull core and push core have three types of setting:



* Refer to CHAPTER 2 MENU (05) PULL CORE SETTING.

12. Unscrew Function:

Unscrew in general has three types of setting:



* Refer to CHAPTER 2 MENU (06) UNSCREW SETTING UNSCREWING has two speeds setting while the same as pull core, UNSCREWING FIRST AND PULL CORE NEXT.

13. ACC. FAST INJECT.:

The Machine must have ACC. CHARGE, RELEASE EQUIP., ACC. inject. is

to increase inject speed to facilitate making thin product with even inner stress.

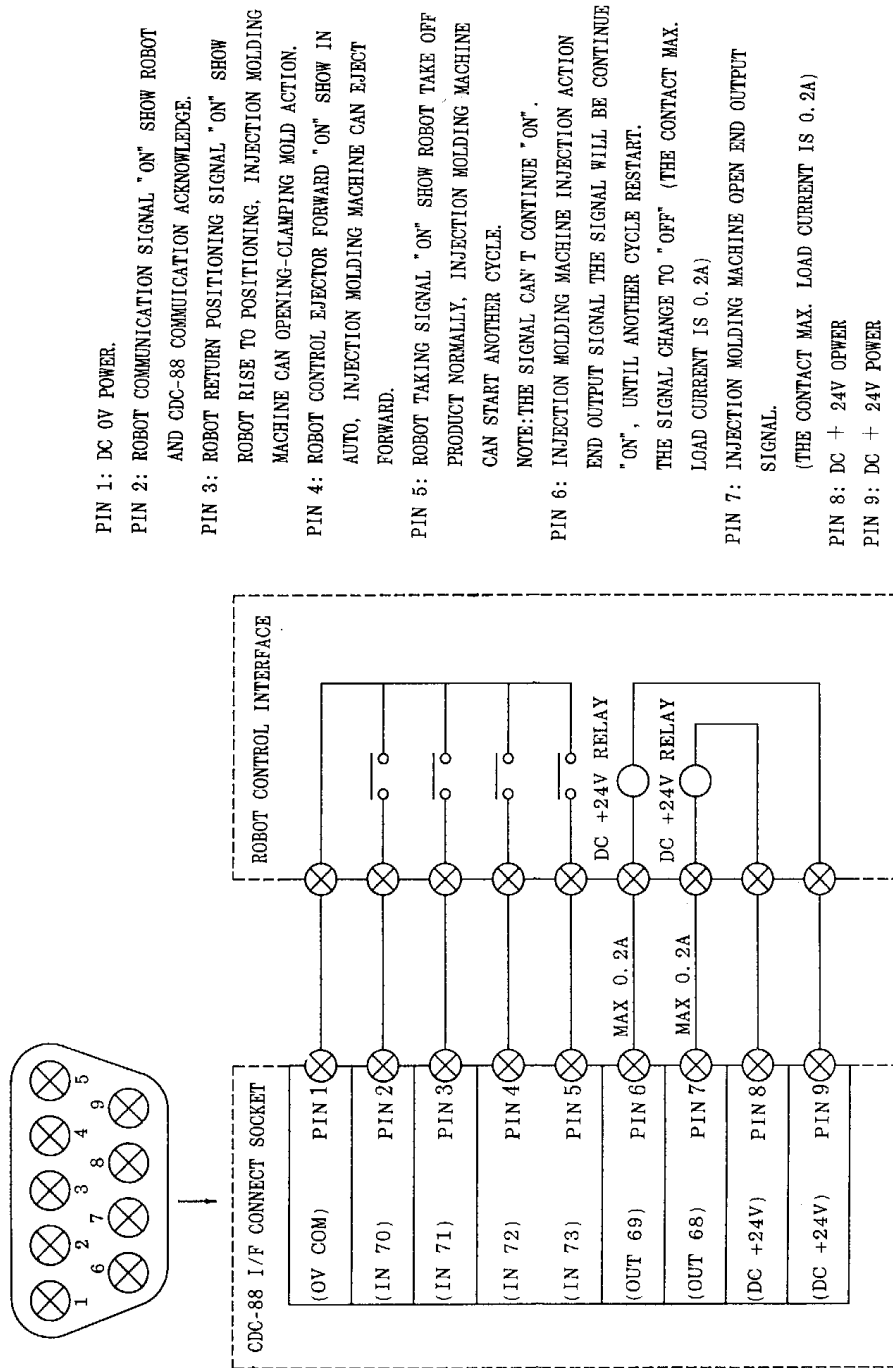
14. AIR BLOW:

Air blowing product away from mold at the end of opening.

15. ROBOT ARM INTERFACE:

With ROBOT ARM linking up with control circuit can make operation in facility.

CDC-88 ROBOT CONTROL ELEC. CIRCUIT DIAGRAM



PIN 1: DC 0V POWER.

PIN 2: ROBOT COMMUNICATION SIGNAL "ON" SHOW ROBOT AND CDC-88 COMMUNICATION ACKNOWLEDGE.

PIN 3: ROBOT RETURN POSITIONING SIGNAL "ON" SHOW ROBOT RISE TO POSITIONING, INJECTION MOLDING MACHINE CAN OPENING-CLAMPING MOLD ACTION.

PIN 4: ROBOT CONTROL EJECTOR FORWARD "ON" SHOW IN AUTO, INJECTION MOLDING MACHINE CAN EJECT FORWARD.

PIN 5: ROBOT TAKING SIGNAL "ON" SHOW ROBOT TAKE OFF PRODUCT NORMALLY, INJECTION MOLDING MACHINE CAN START ANOTHER CYCLE.

NOTE: THE SIGNAL CAN'T CONTINUE "ON".

PIN 6: INJECTION MOLDING MACHINE INJECTION ACTION END OUTPUT SIGNAL THE SIGNAL WILL BE CONTINUE "ON", UNTIL ANOTHER CYCLE RESTART.

THE SIGNAL CHANGE TO "OFF" (THE CONTACT MAX. LOAD CURRENT IS 0.2A)

PIN 7: INJECTION MOLDING MACHINE OPEN END OUTPUT SIGNAL.

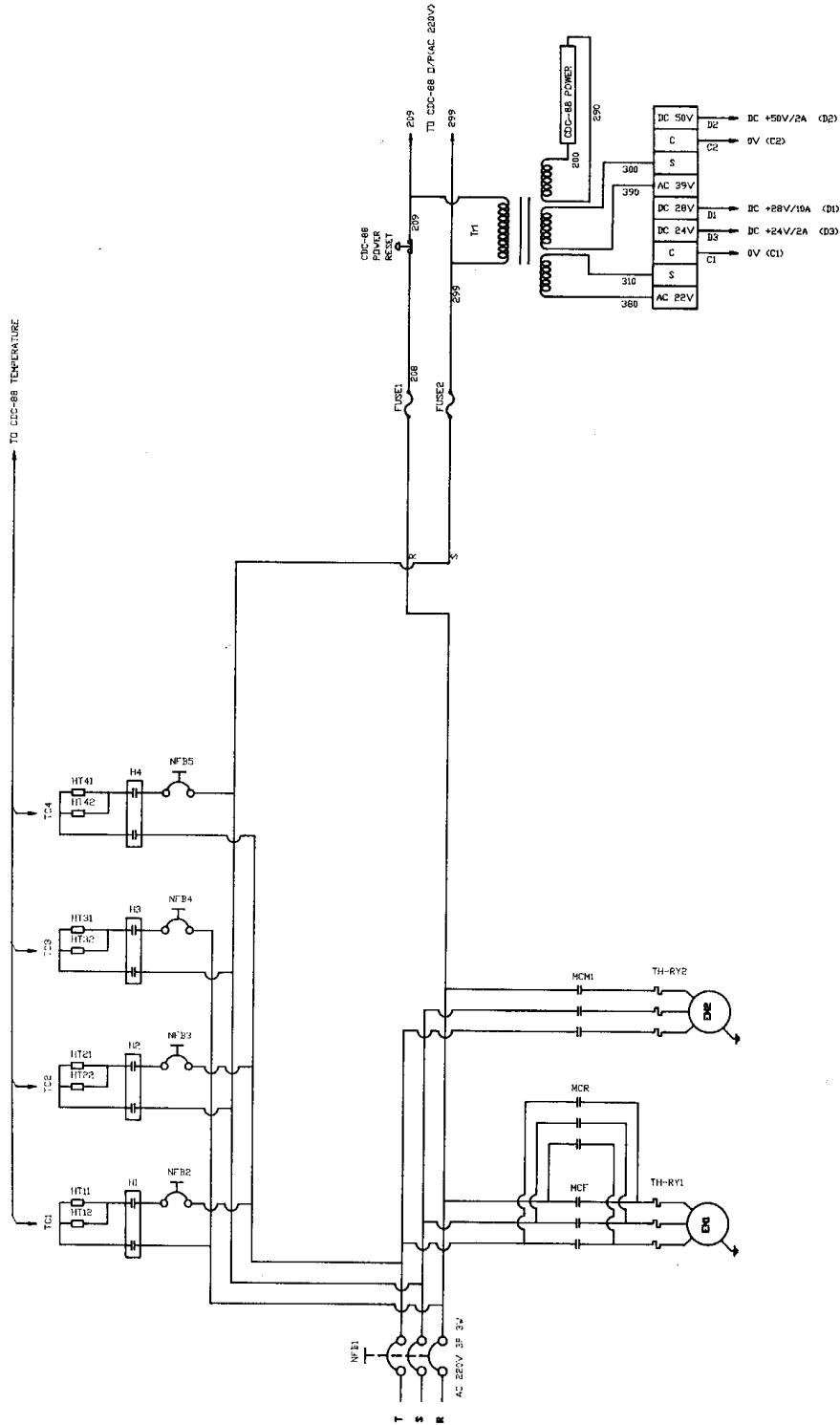
(THE CONTACT MAX. LOAD CURRENT IS 0.2A)

PIN 8: DC + 24V POWER

PIN 9: DC + 24V POWER

CIRCUIT DIAGRAM (1)
SM-50 電路圖(1)

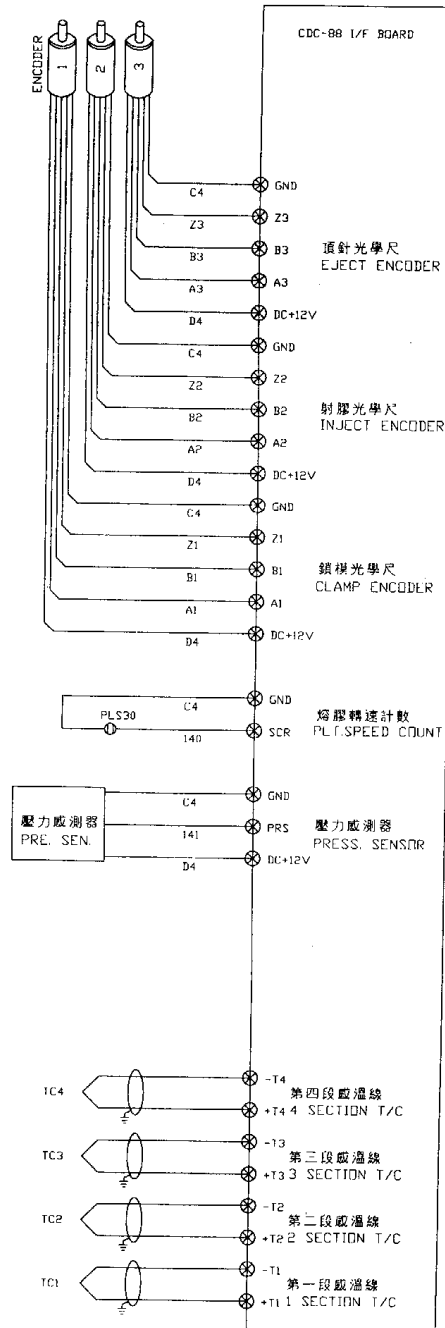
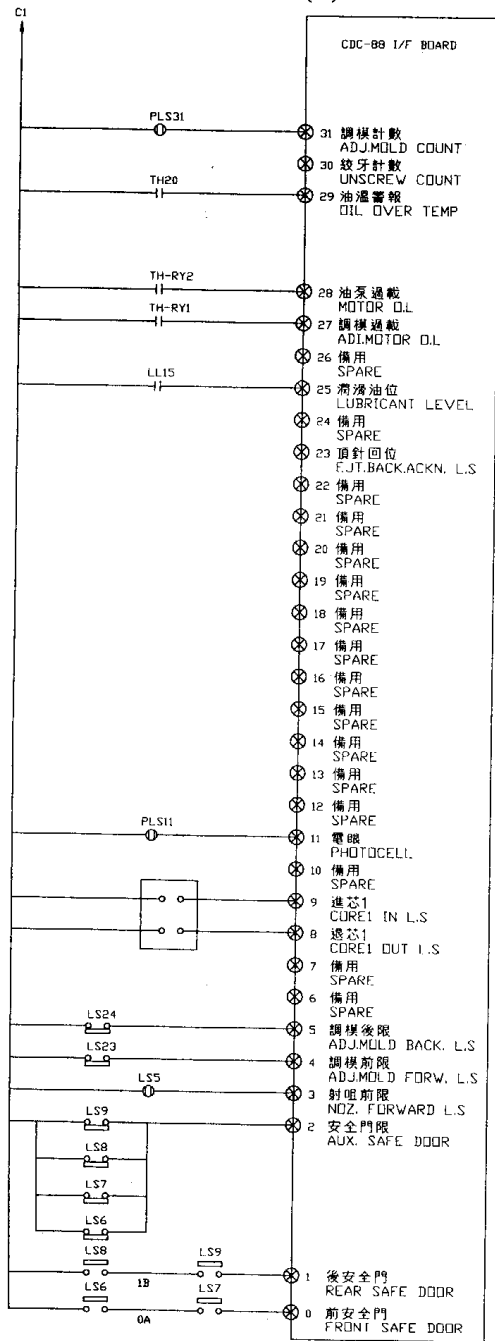
1992.05.29



SM-50 電路圖(2)

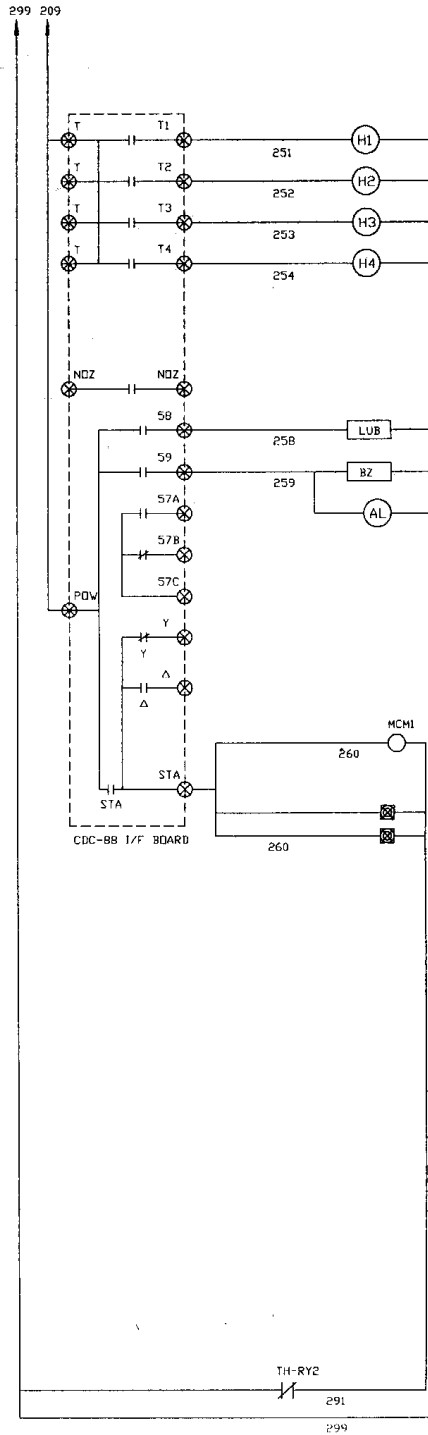
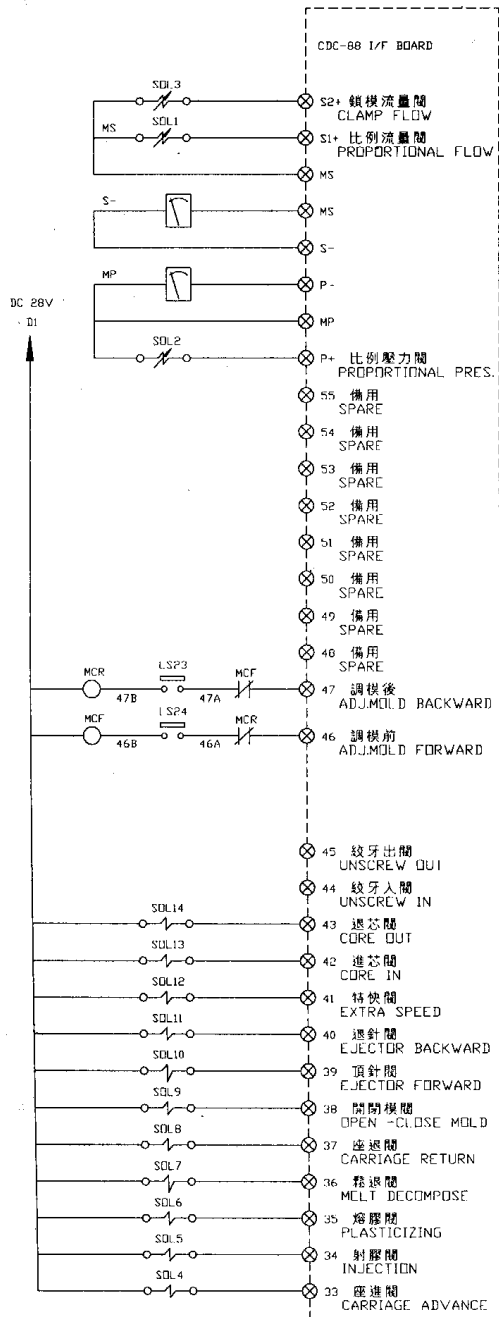
ELEC.CIRCUIT(2)

1993/06/22



SM-50 電路圖(3)
ELEC.CIRCUIT(3)

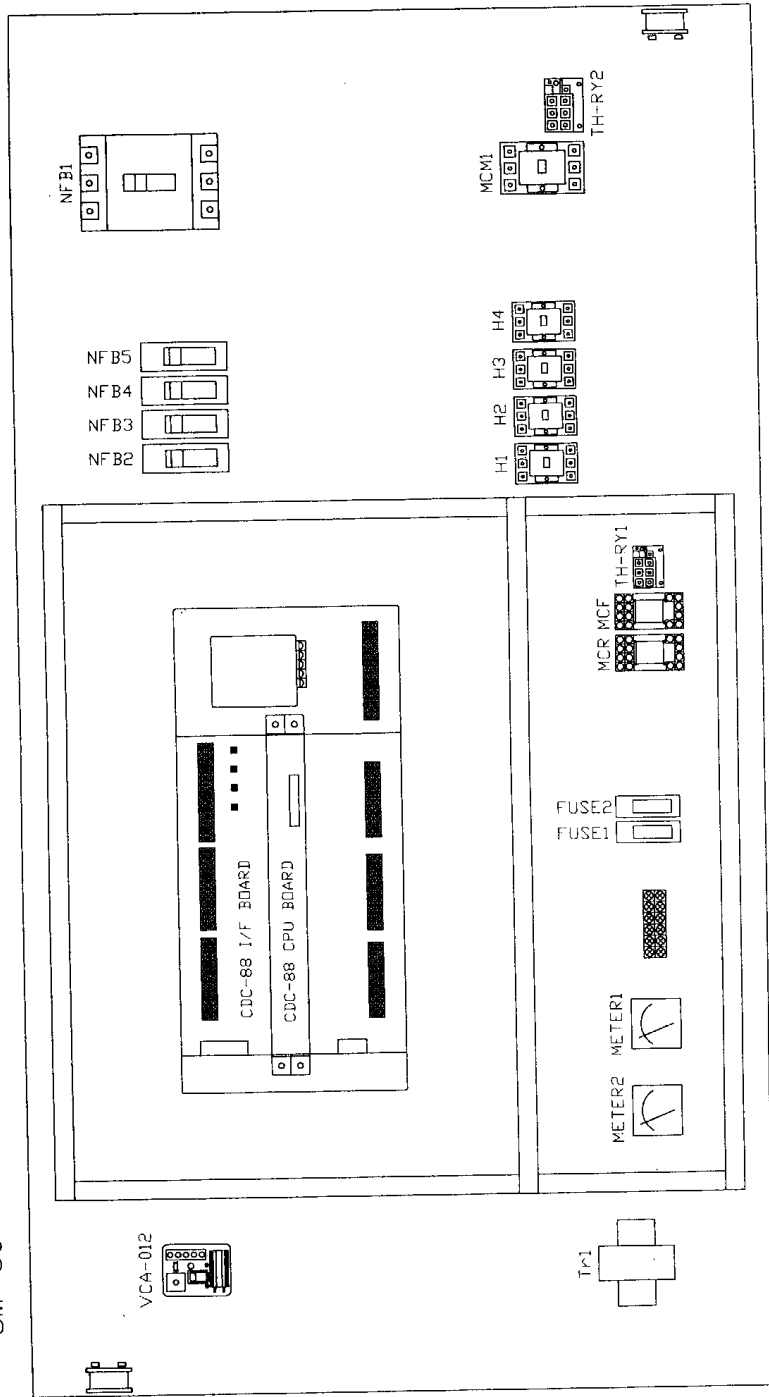
1993/06/22



ELEC. BOX LAYOUT

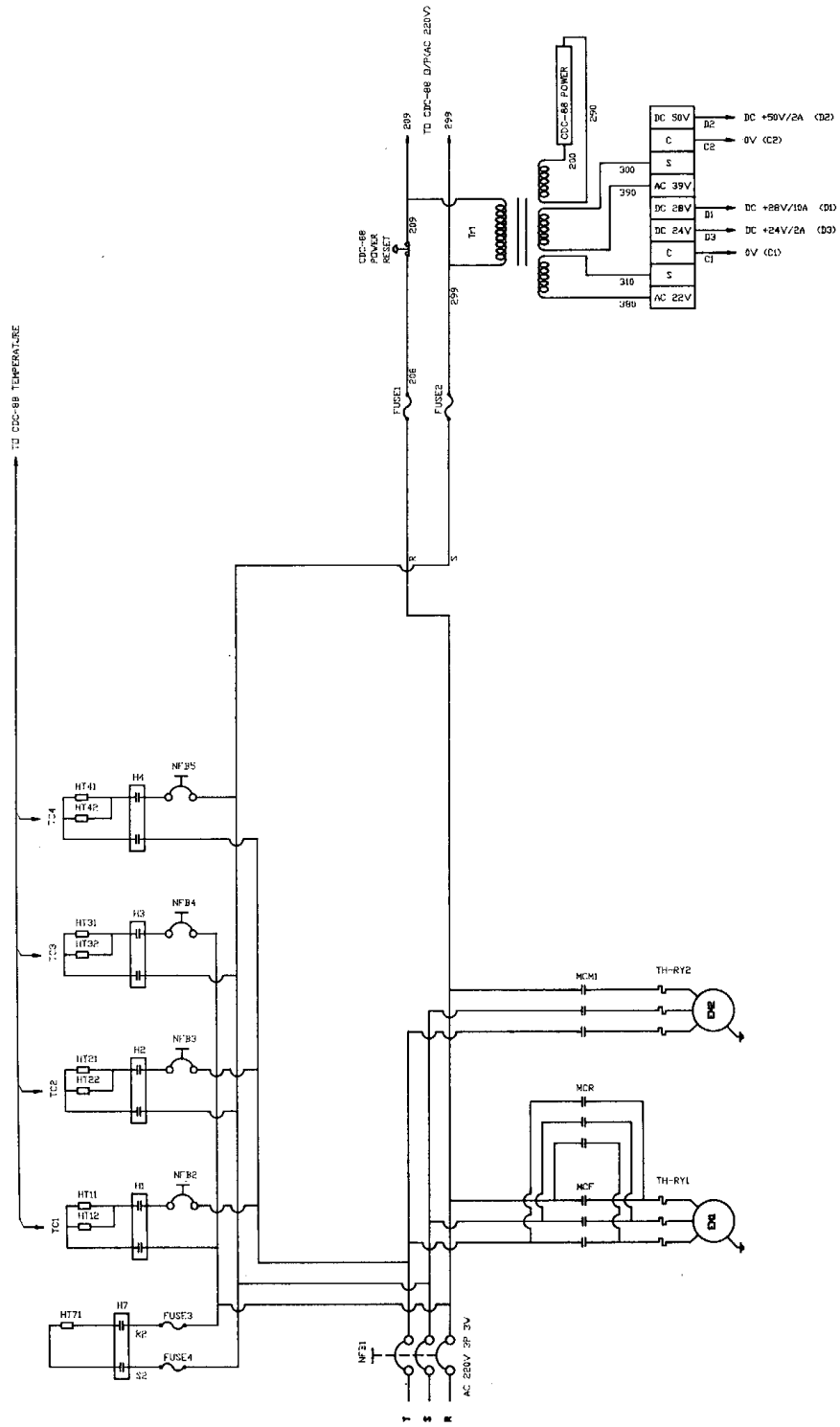
SM-50 電箱配置圖

1993/06/10



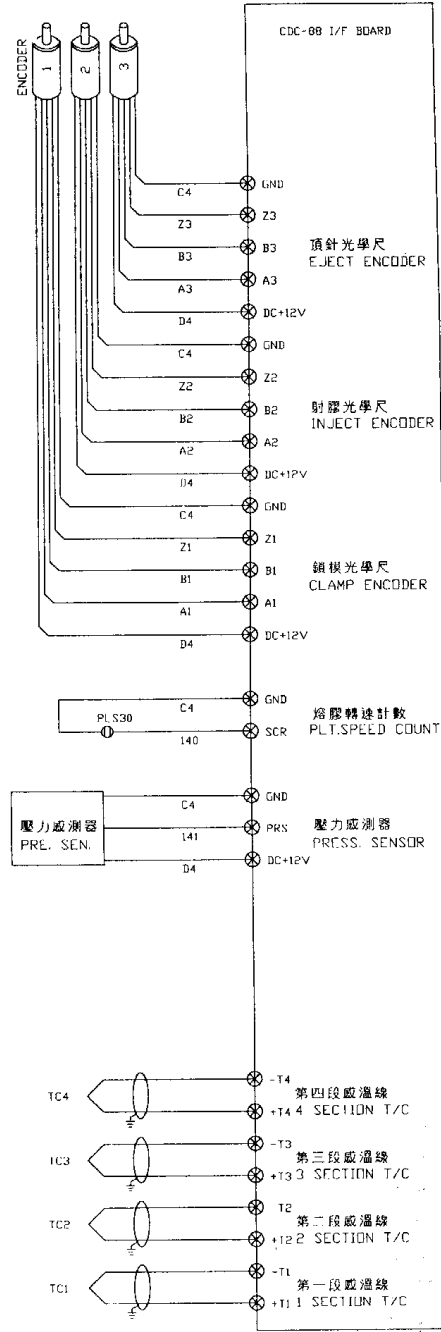
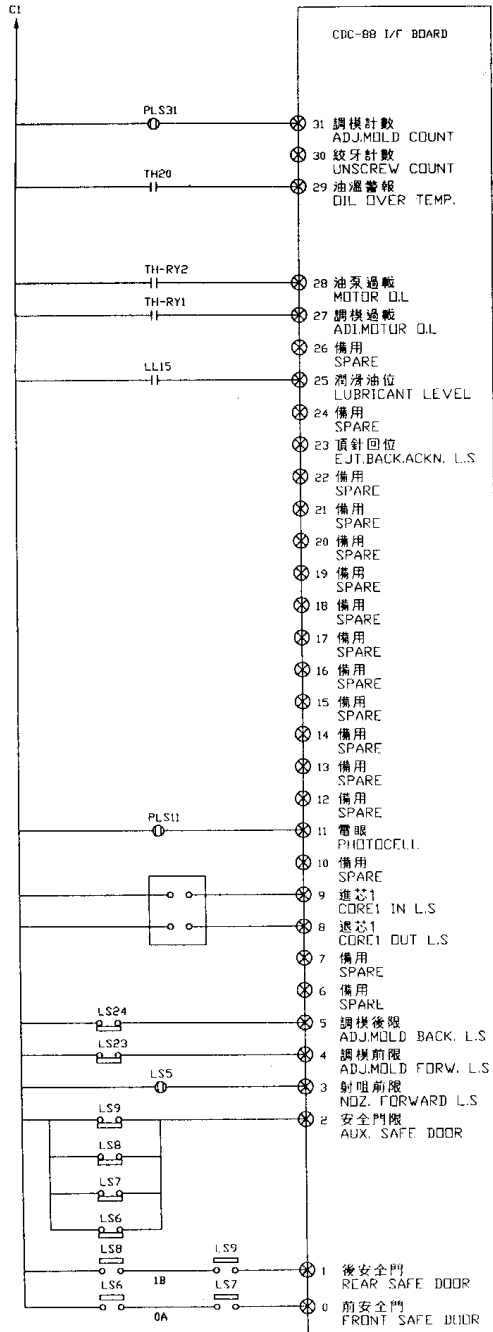
CIRCUIT DIAGRAM (1)
SM-90 電路圖(1)

1992/05/29



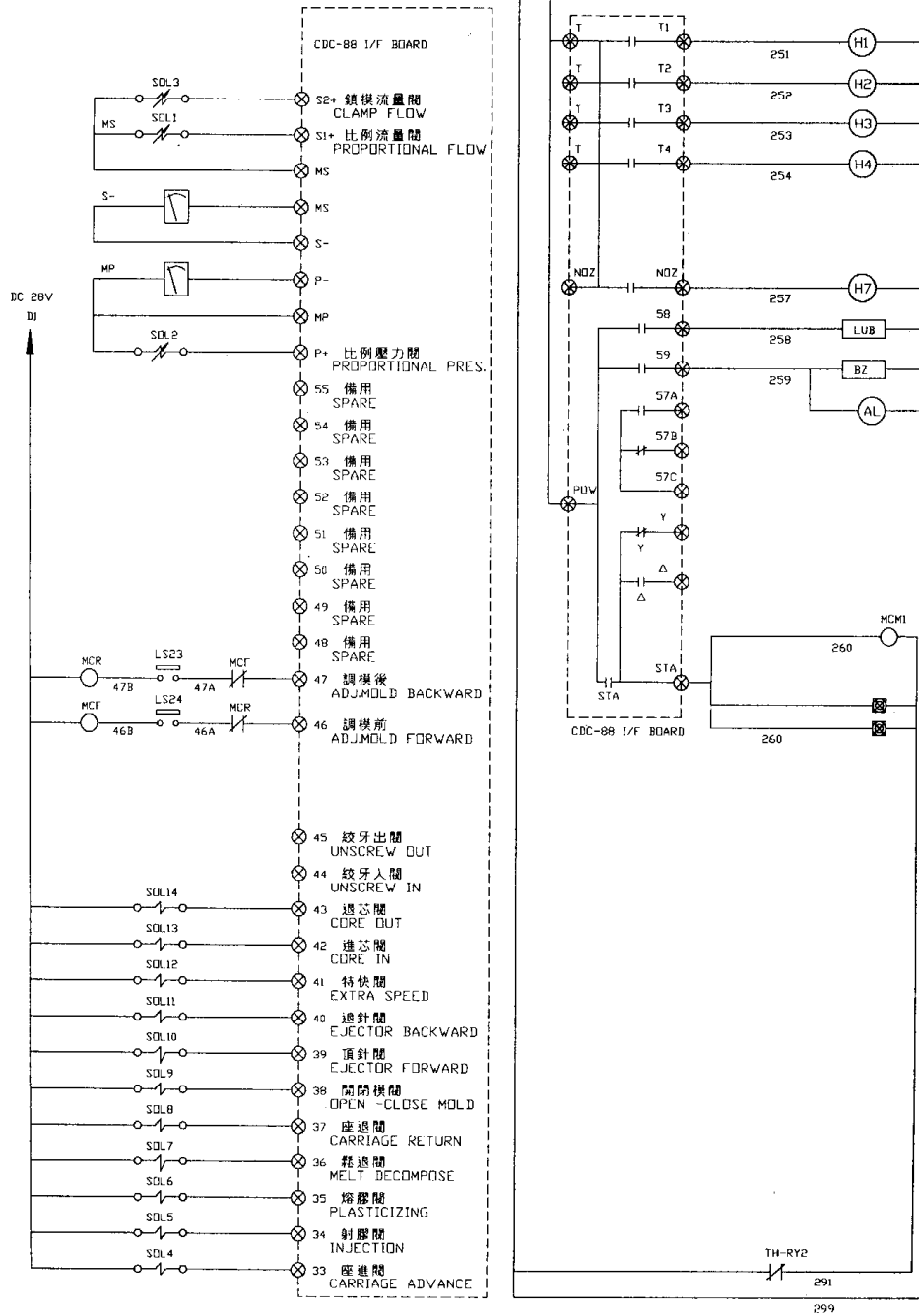
SM-90 電路圖(2)
ELEC.CIRCUIT(2)

199/06/22



SM-90 電路圖(3)
ELEC.CIRCUIT(3)

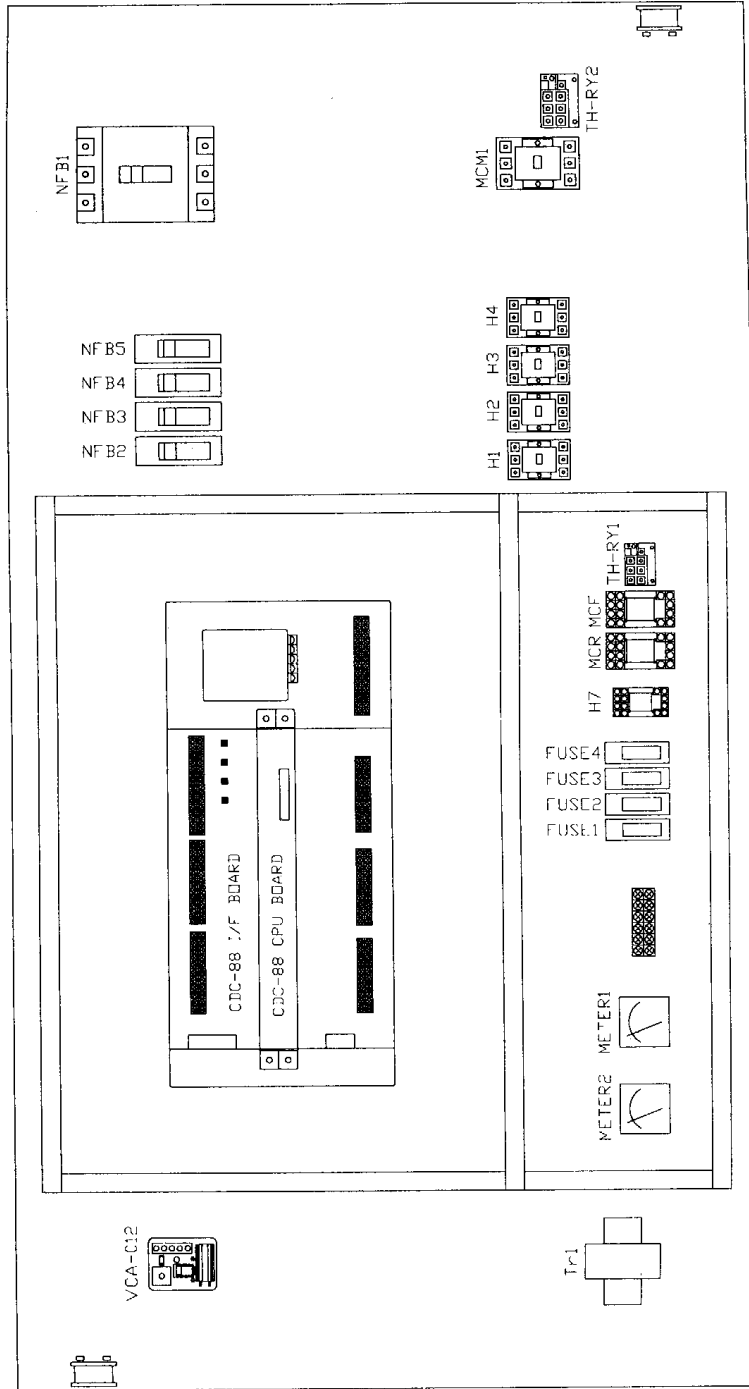
1993/06/22



ELEC. BOX LAYOUT

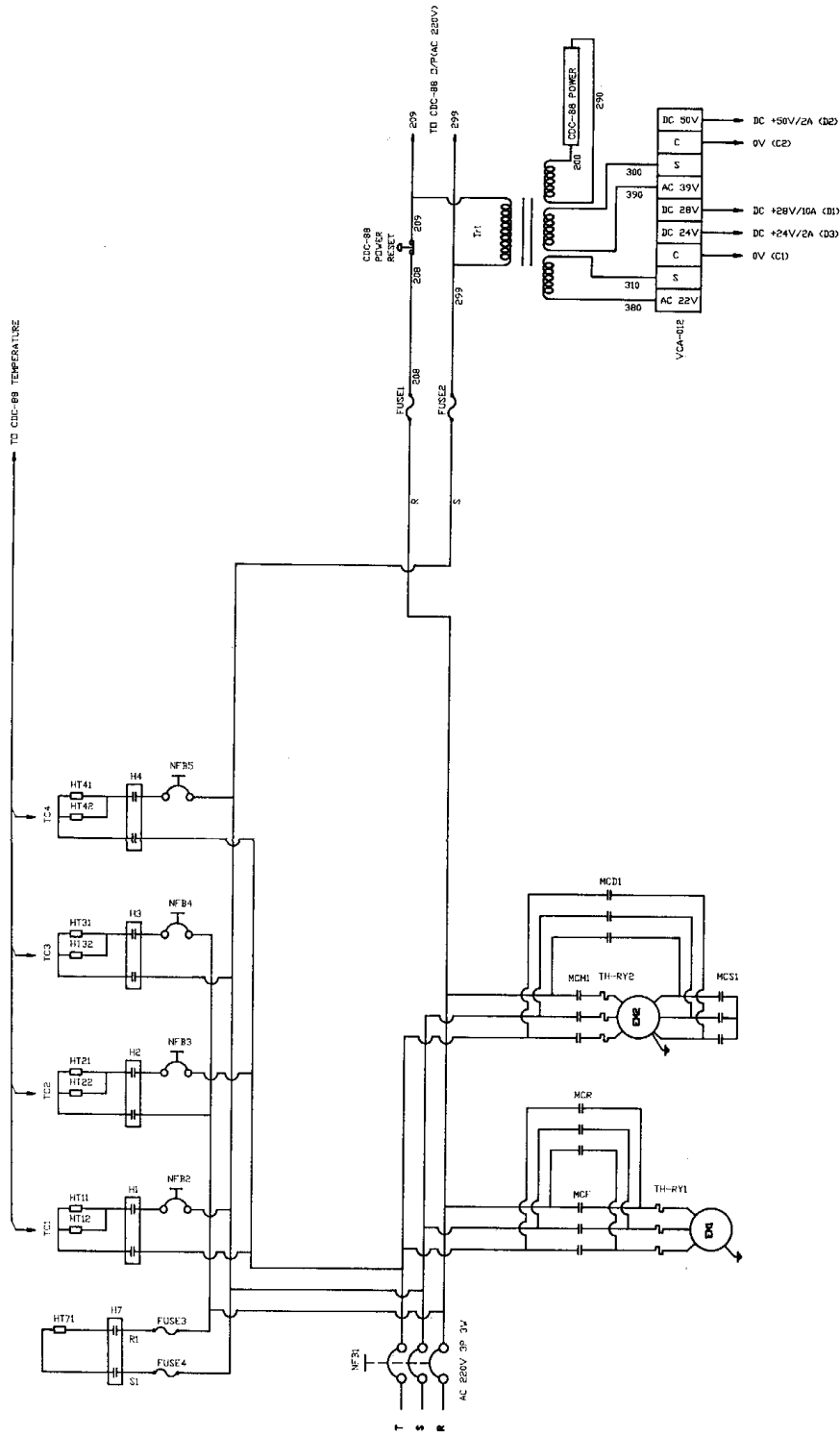
SM-90 電箱配置圖

1993/06/10



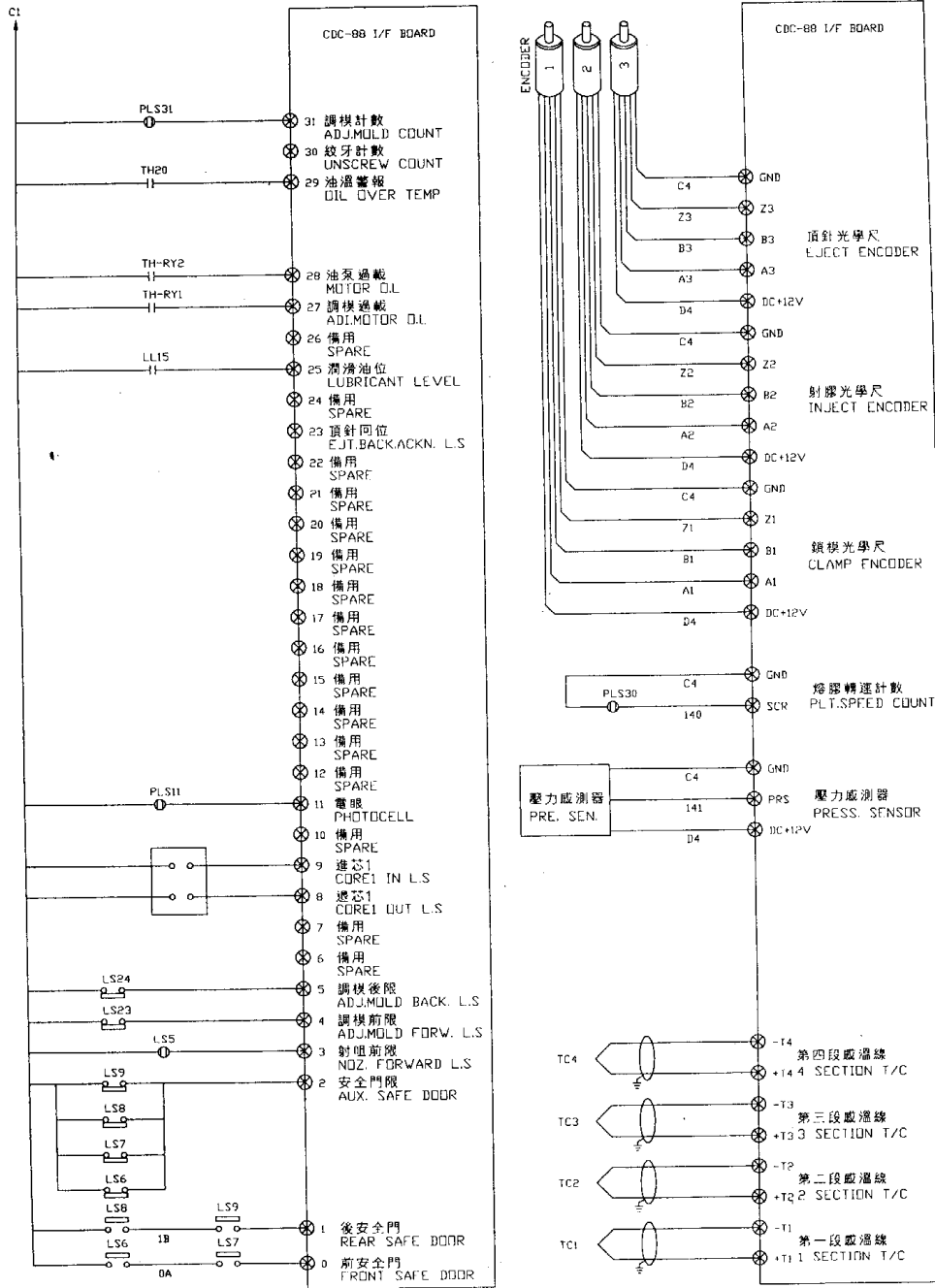
CIRCUIT DIAGRAM (1)
SM-120 電路圖(1)

1993/05/31



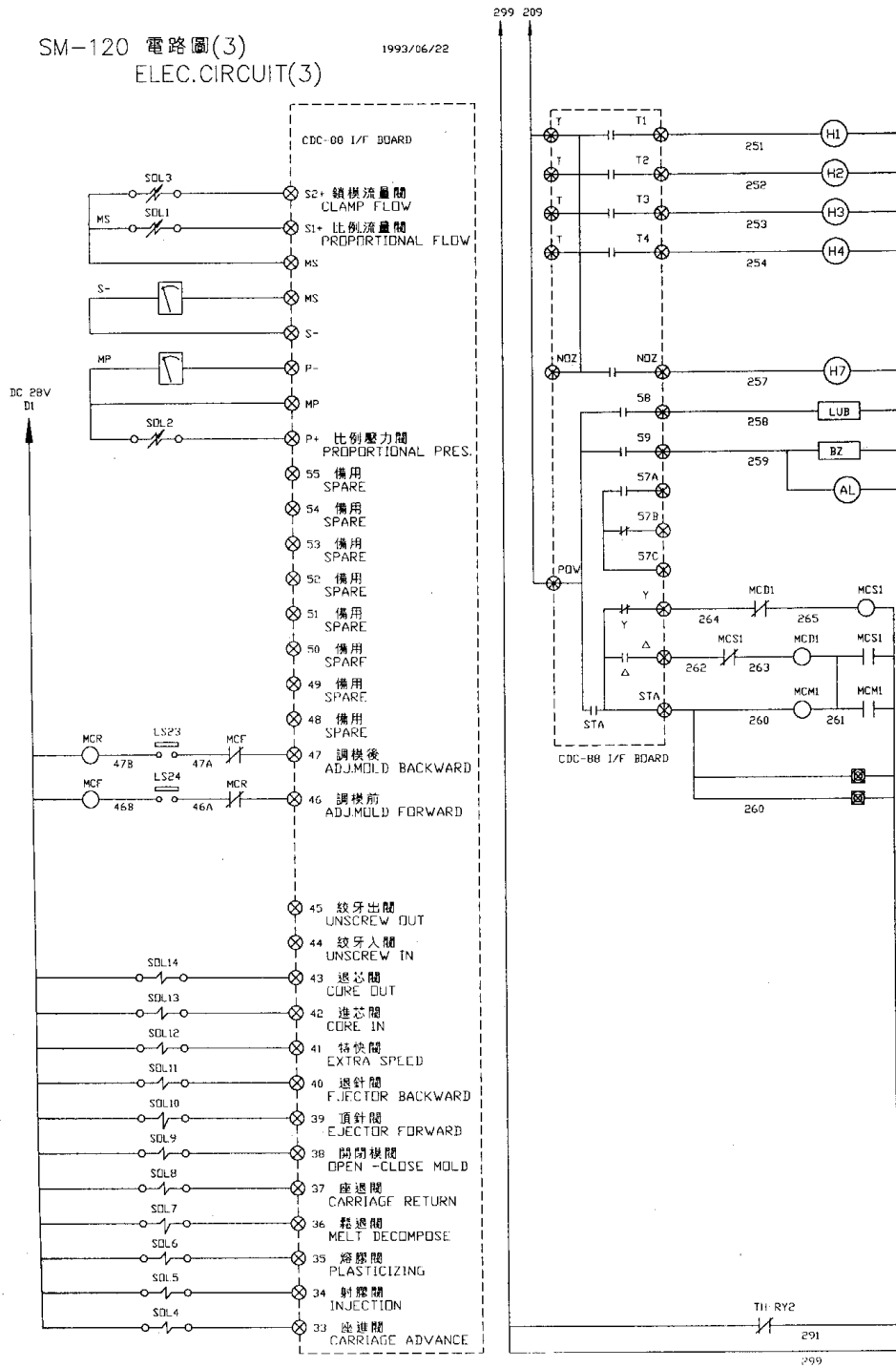
SM-120 電路圖(2)
ELEC.CIRCUIT(2)

1993/06/22



SM-120 電路圖(3)
ELEC.CIRCUIT(3)

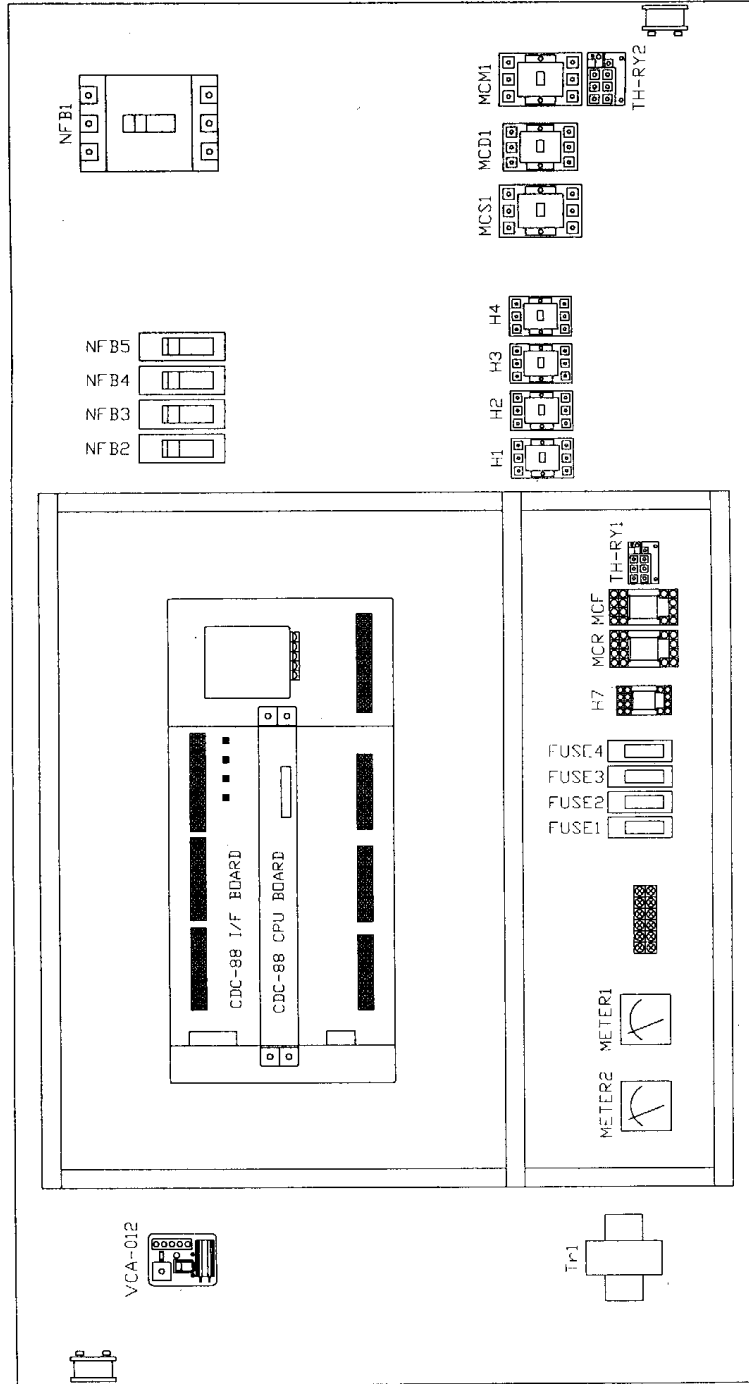
1993/06/22



ELEC. BOX LAYOUT

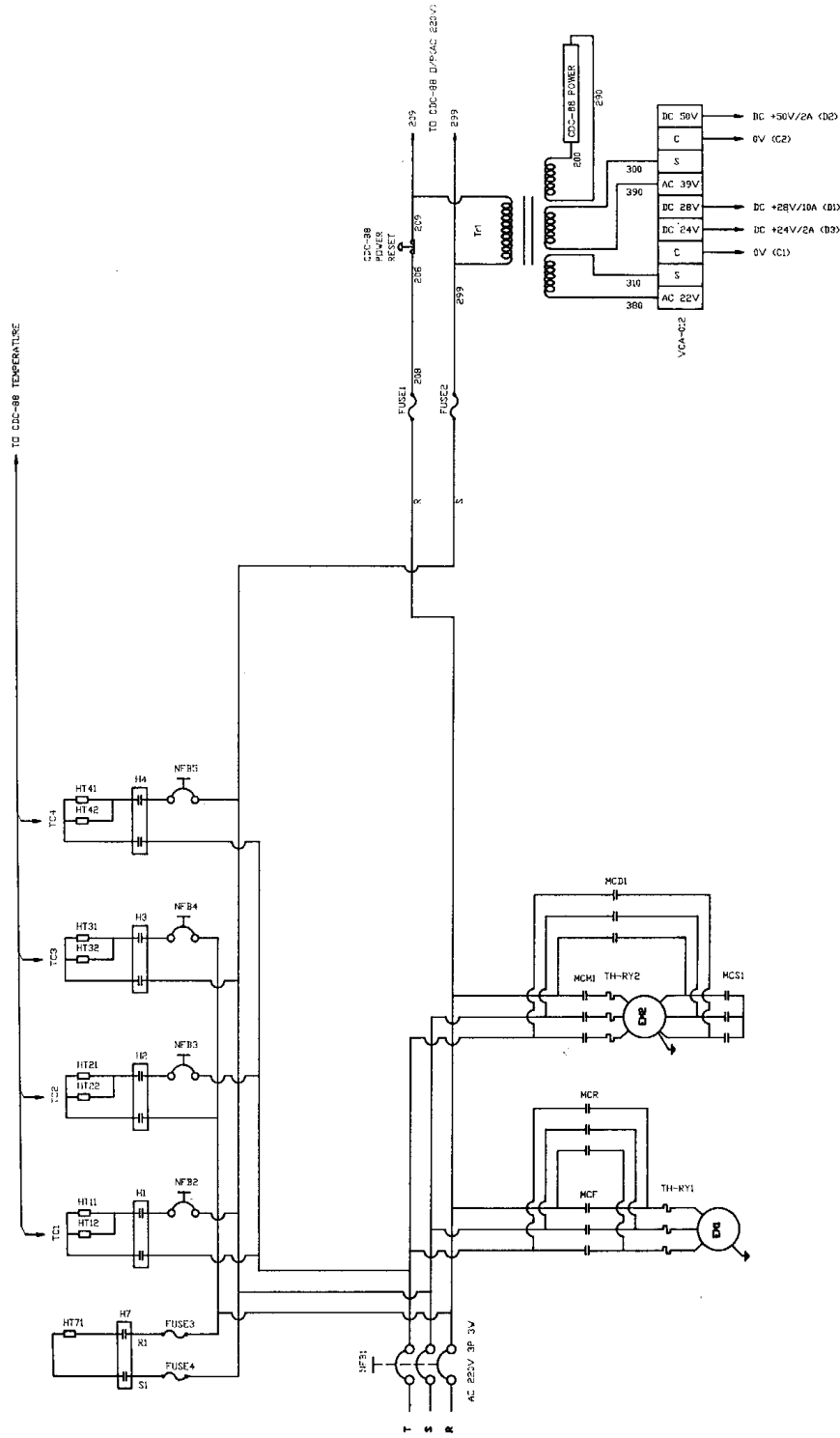
SM-120 電箱配置圖

1993/06/10



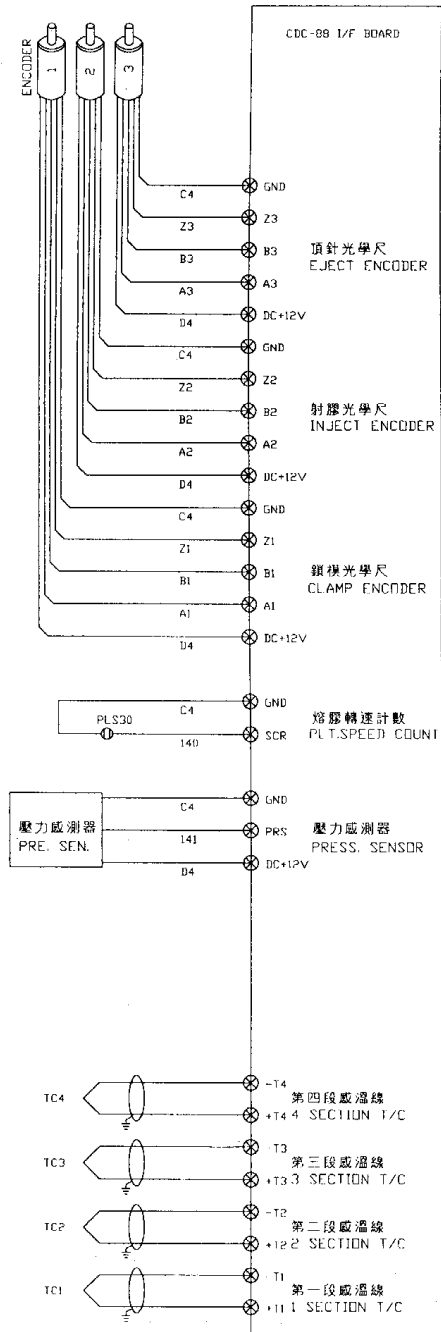
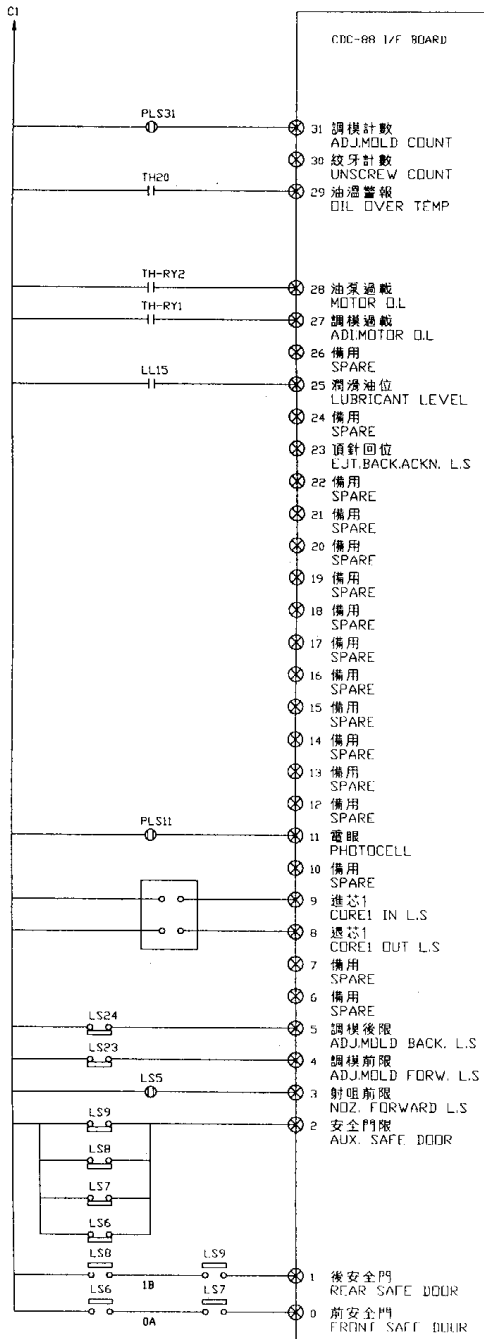
CIRCUIT DIAGRAM (1)
SM-150 電路圖(1)

1993/05/31



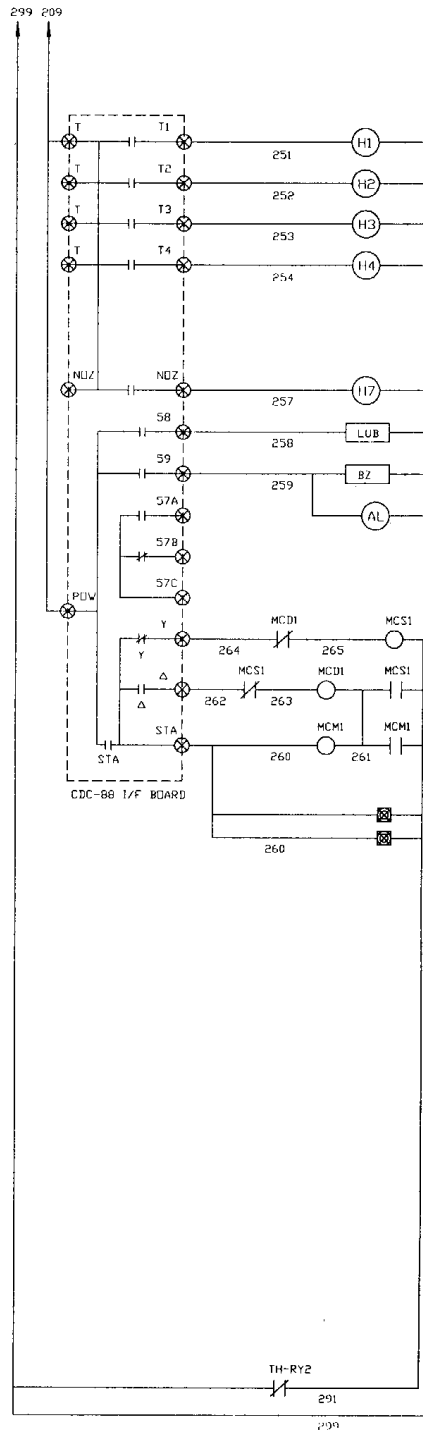
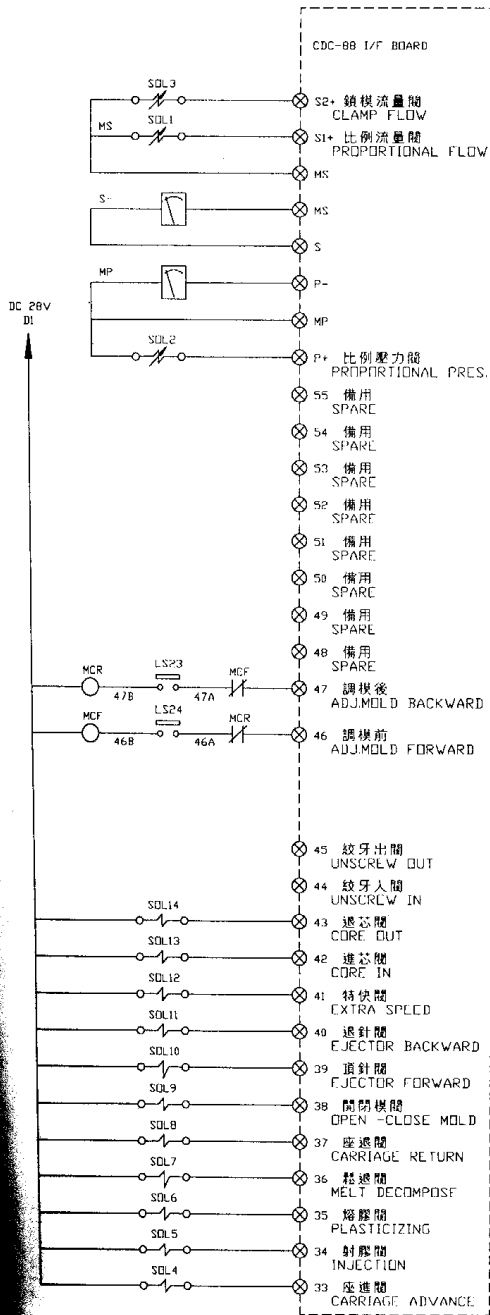
SM-150 電路圖(2)
ELEC.CIRCUIT(2)

1993/06/22



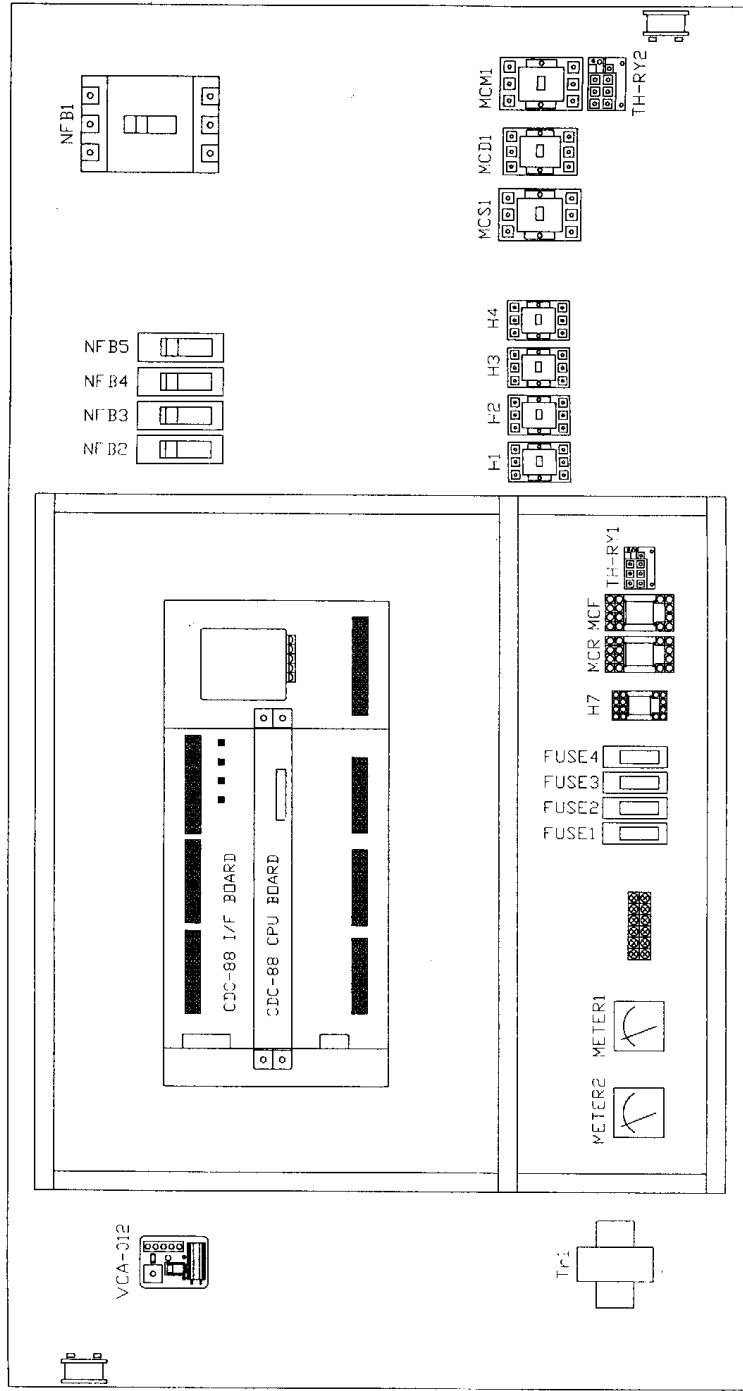
SM-150 電路圖(3)
ELEC.CIRCUIT(3)

1993/06/22



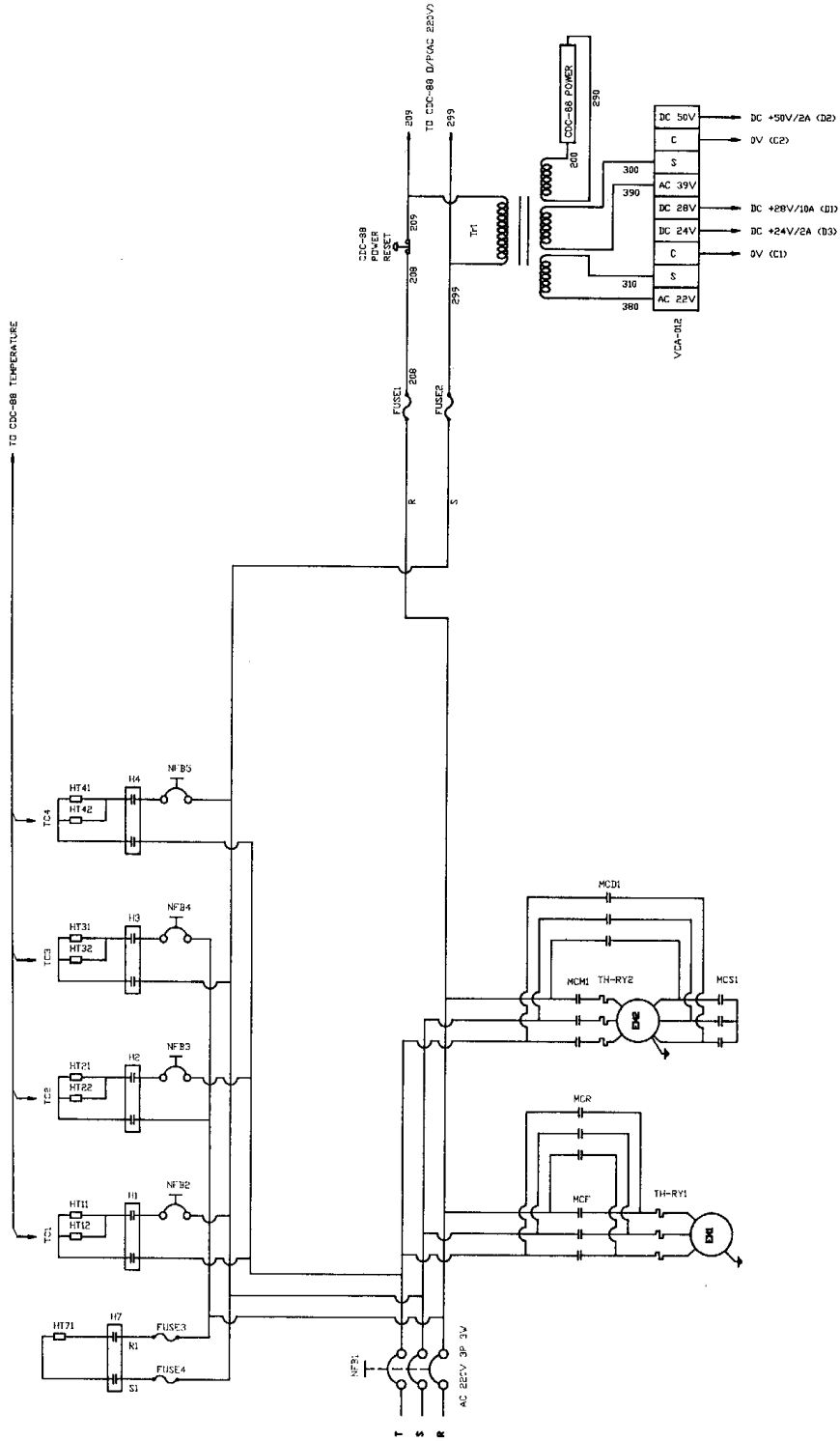
ELEC. BOX LAYOUT
SM-150 電箱配置圖

1993/06/10



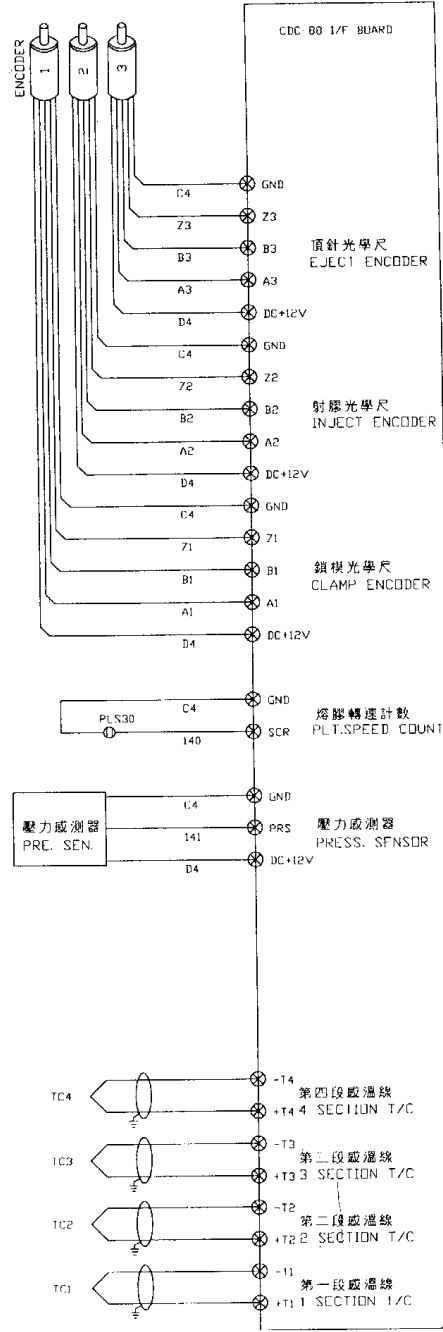
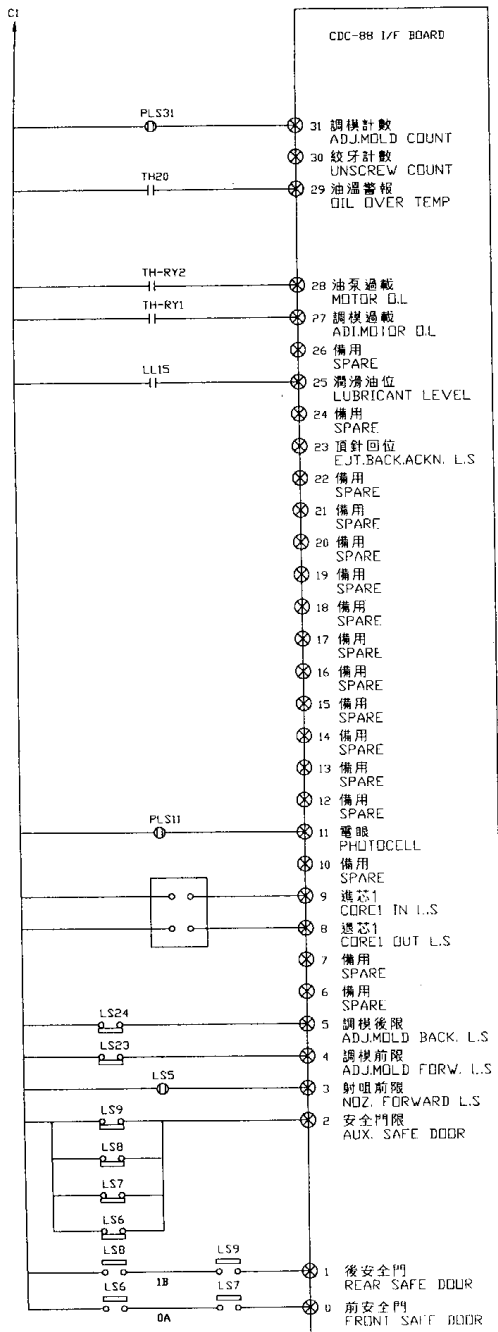
CIRCUIT DIAGRAM (I)
SM-180 電路圖(1)

1993/05/31



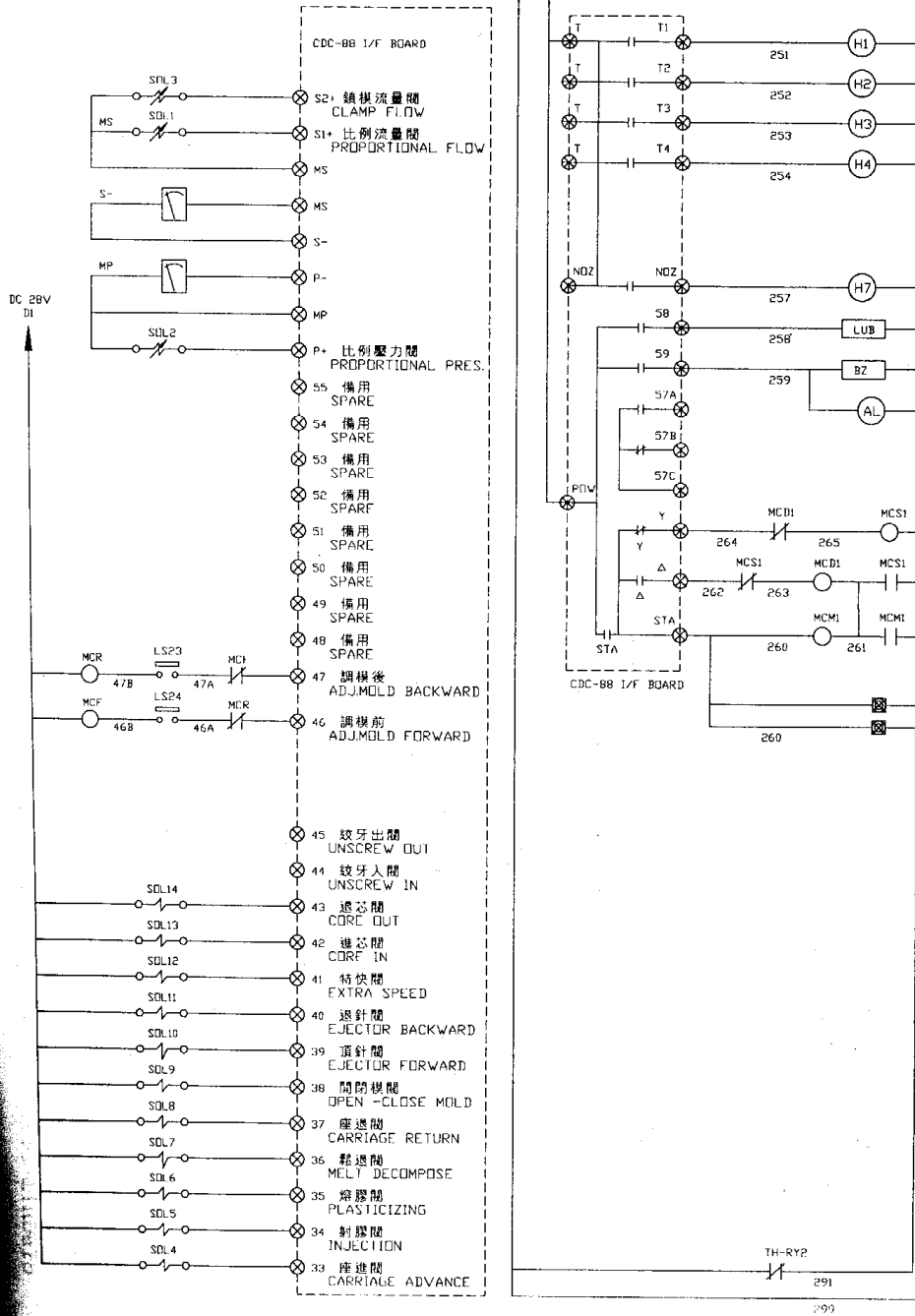
SM-180 電路圖(2)
ELEC.CIRCUIT(2)

1993/06/22



SM-180 電路圖(3)
ELEC.CIRCUIT(3)

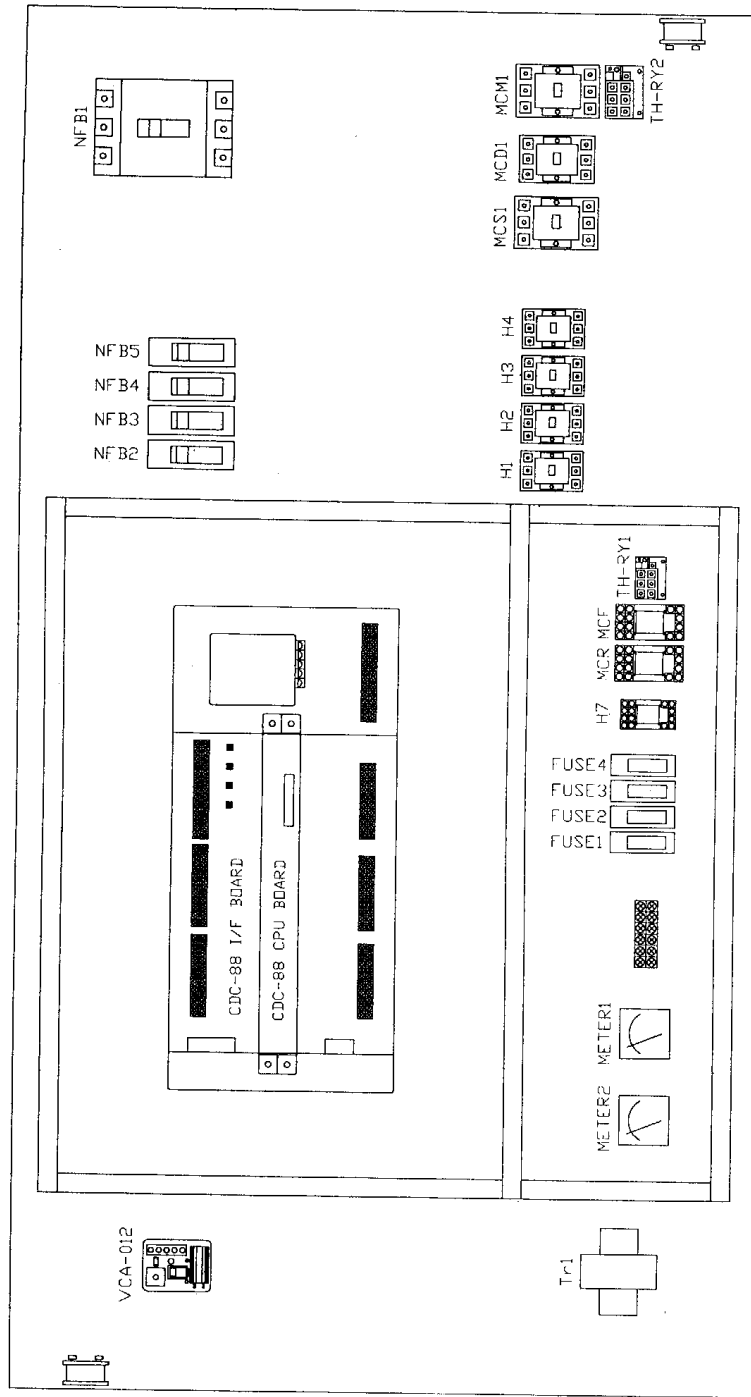
1993/06/22



ELEC. BOX LAYOUT

SM-180 電箱配置圖

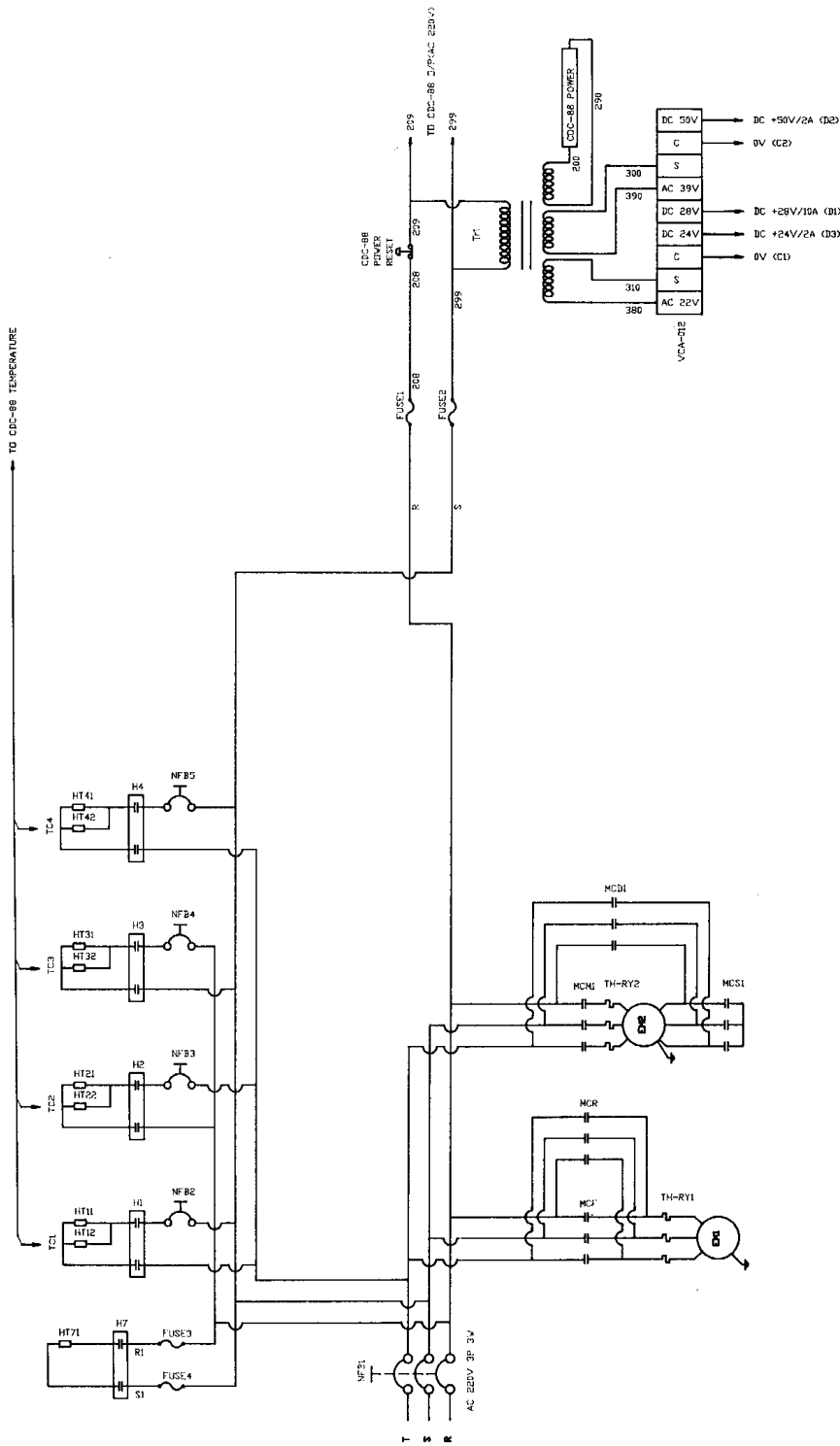
1993/06/10



CIRCUIT DIAGRAM (1)
SM-210 電路圖(1)

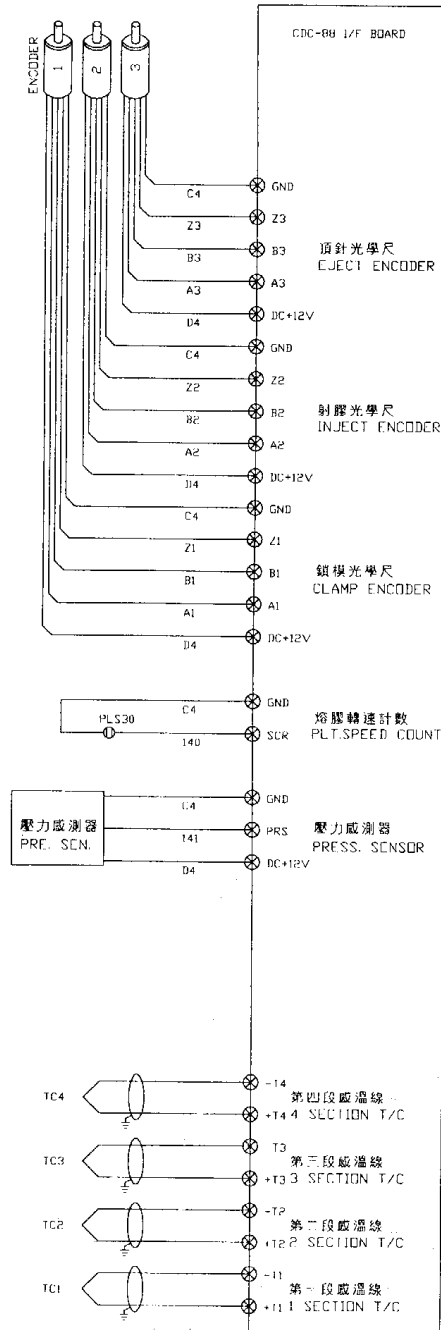
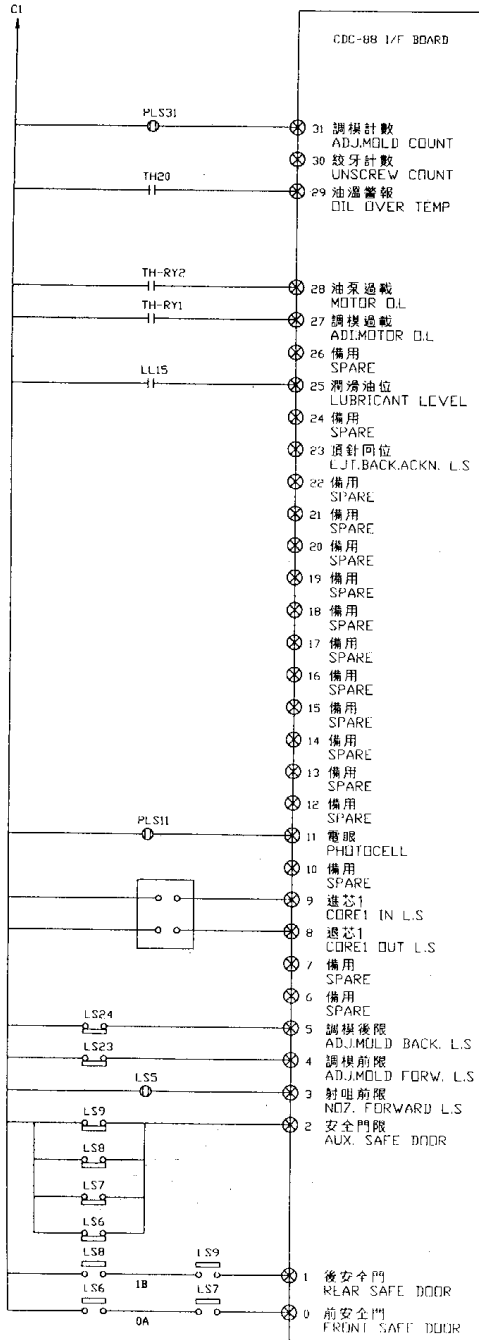
1992/05/31

TO CDC-88 TEMPERATURE



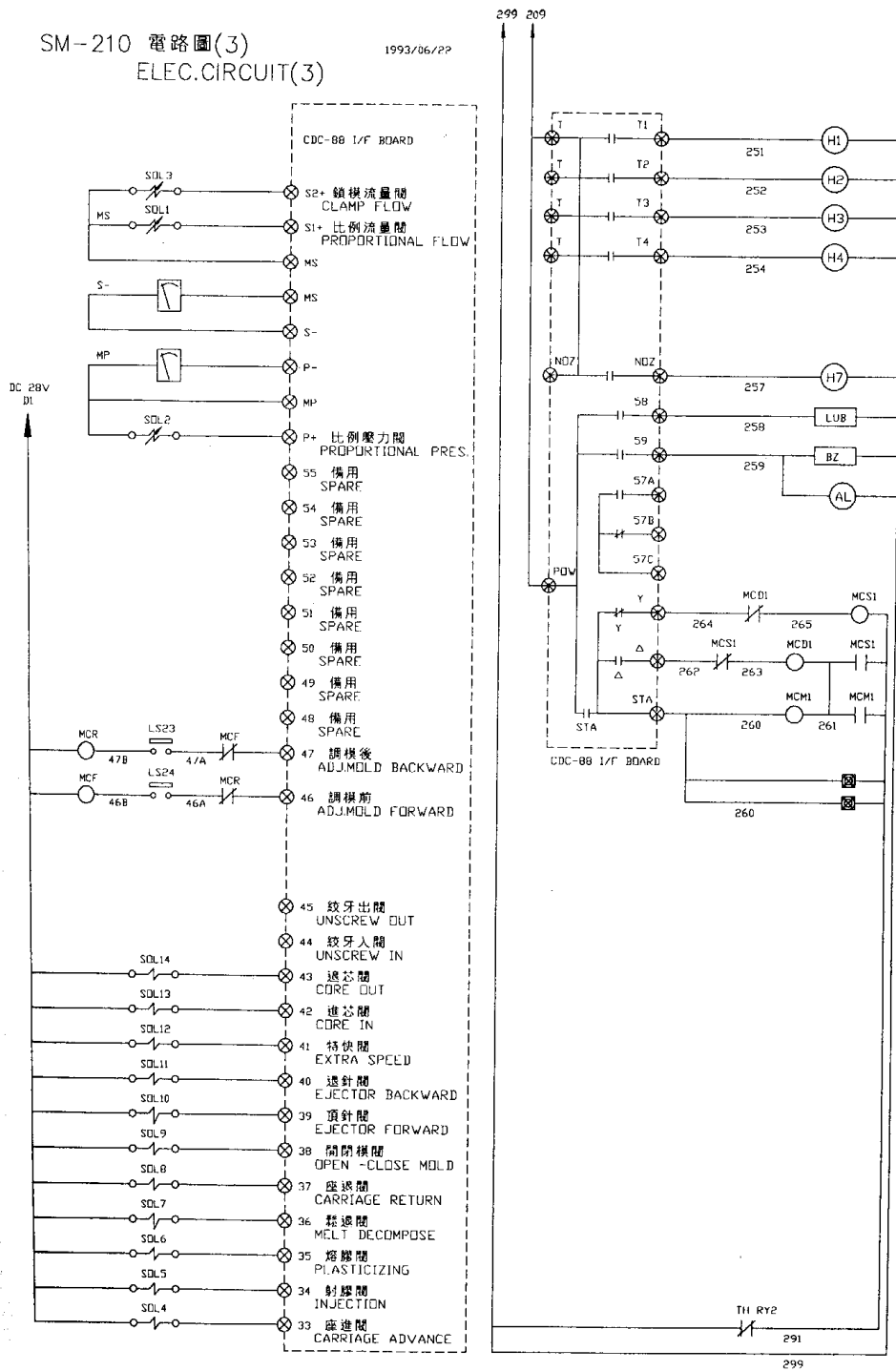
SM-210 電路圖(2)
ELEC.CIRCUIT(2)

1993/06/22



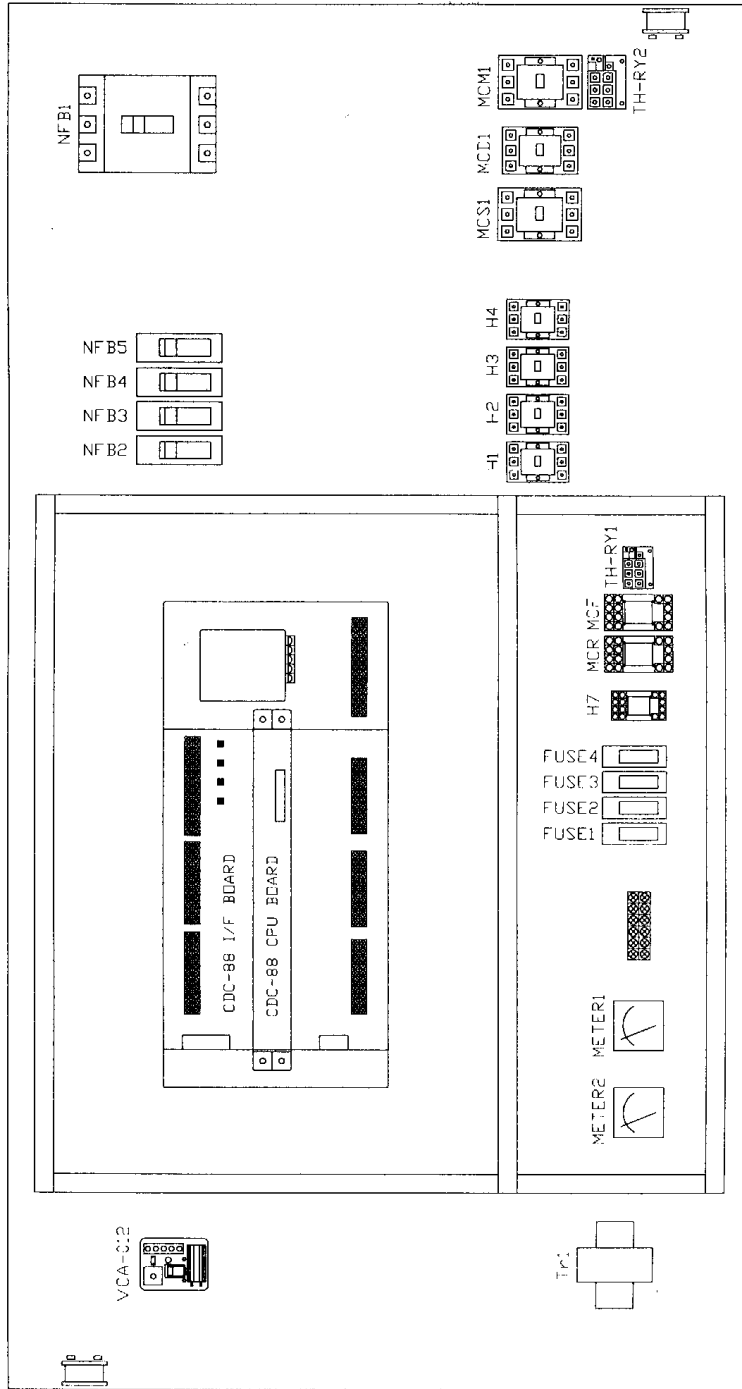
SM-210 電路圖(3)
ELEC.CIRCUIT(3)

1993/06/22



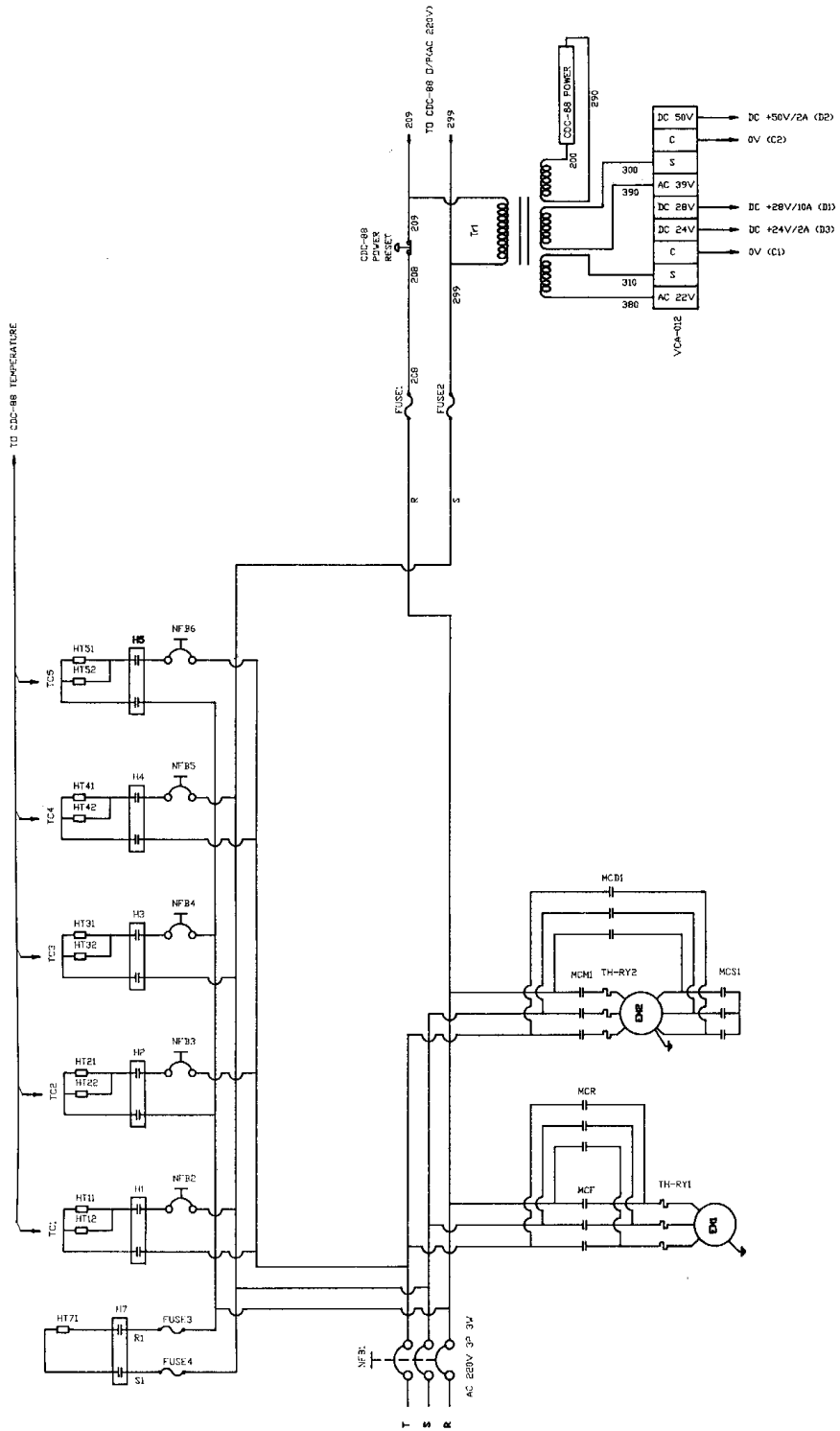
ELEC. BOX LAYOUT
SM-210 電箱配置圖

1993/06/10



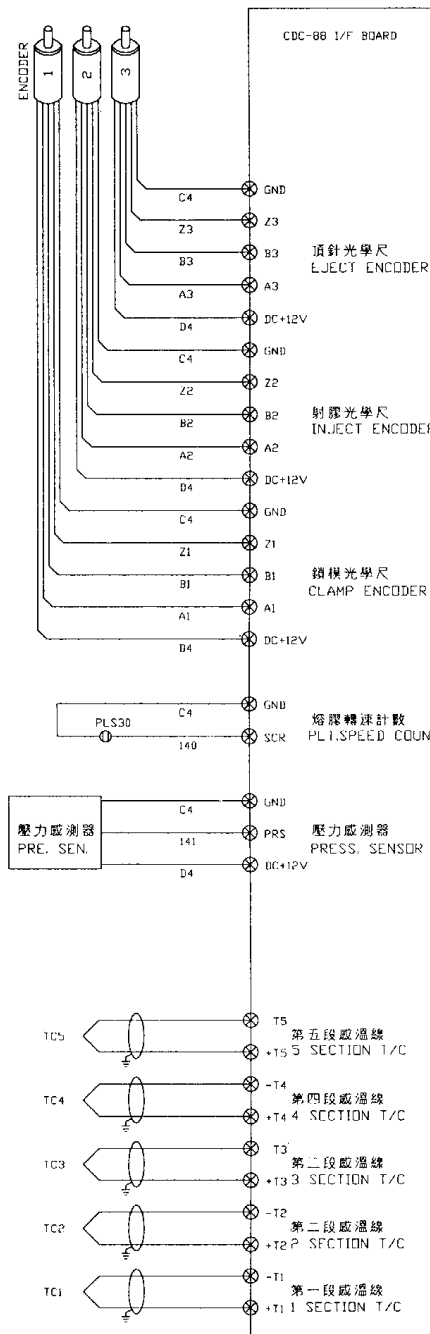
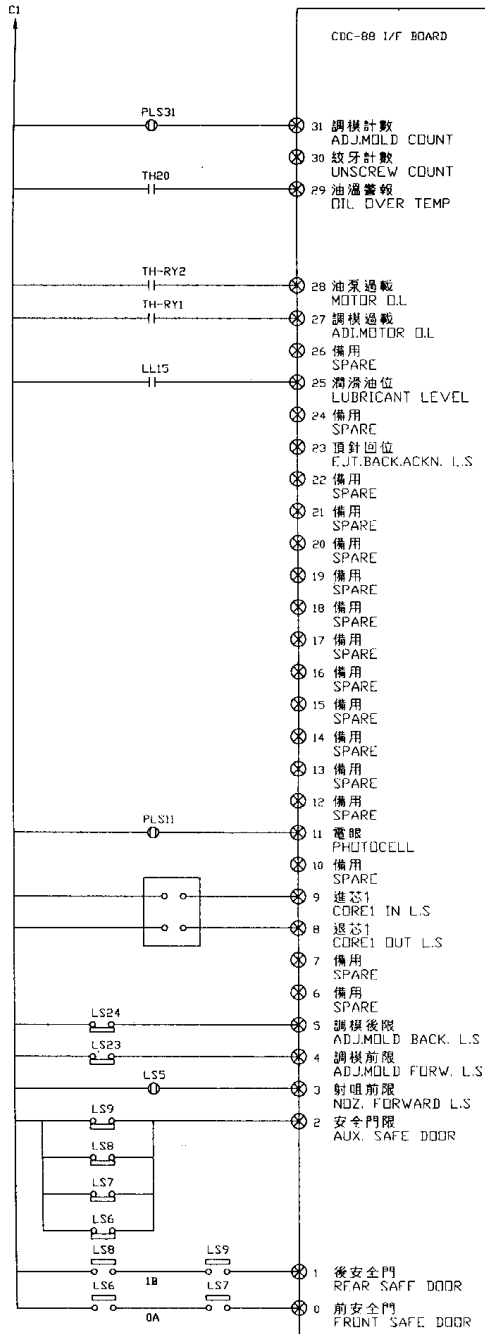
CIRCUIT DIAGRAM (1)
SM-250 電路圖(1)

1993/05/31



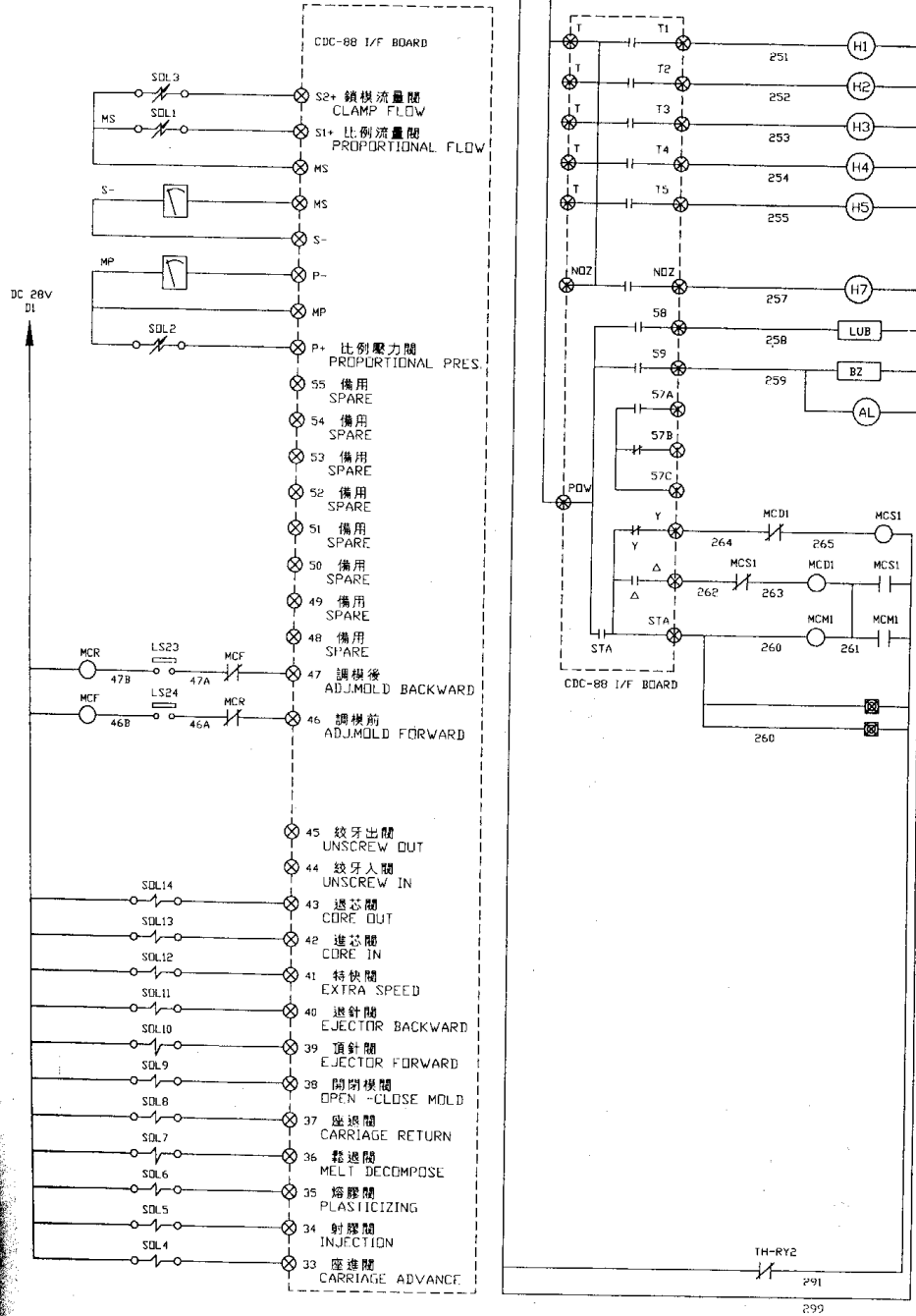
SM-250 電路圖(2)
ELEC.CIRCUIT(2)

1993/06/22



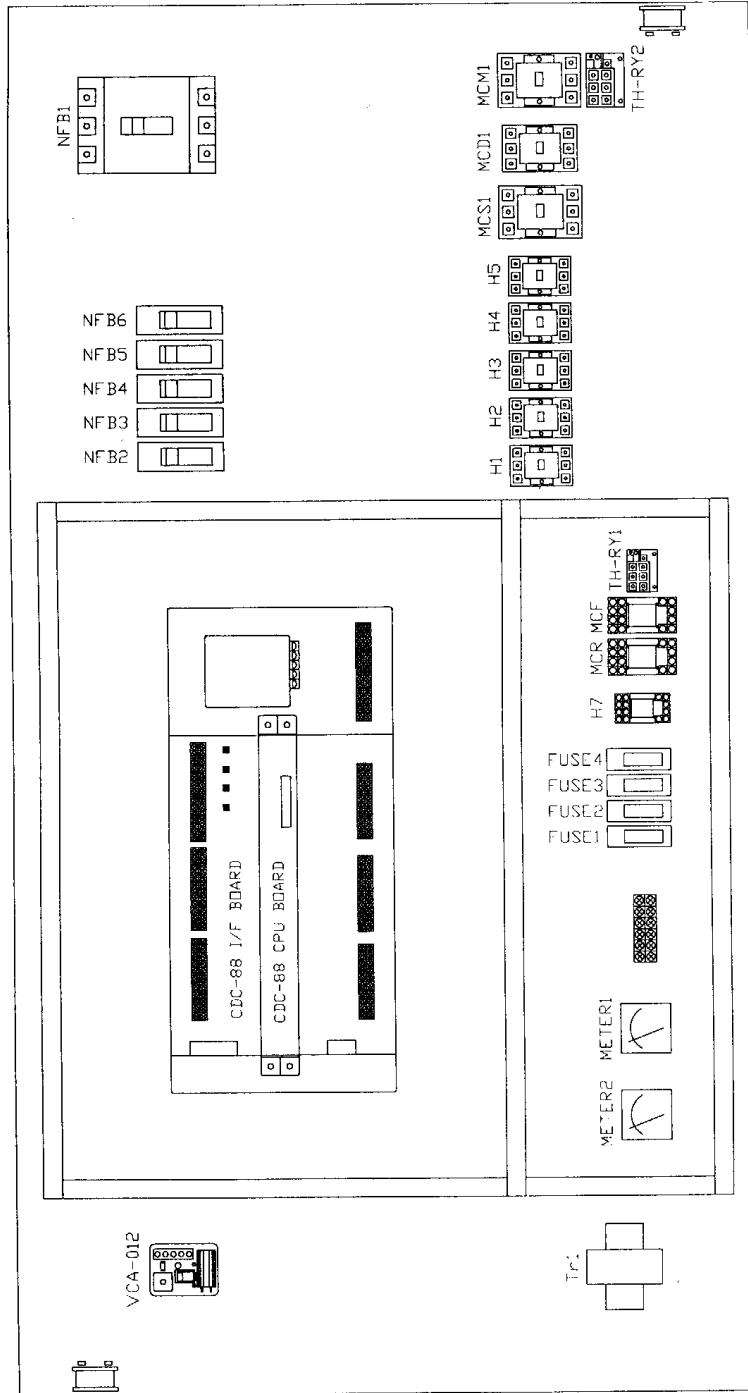
SM-250 電路圖(3)
ELEC.CIRCUIT(3)

1993/06/22



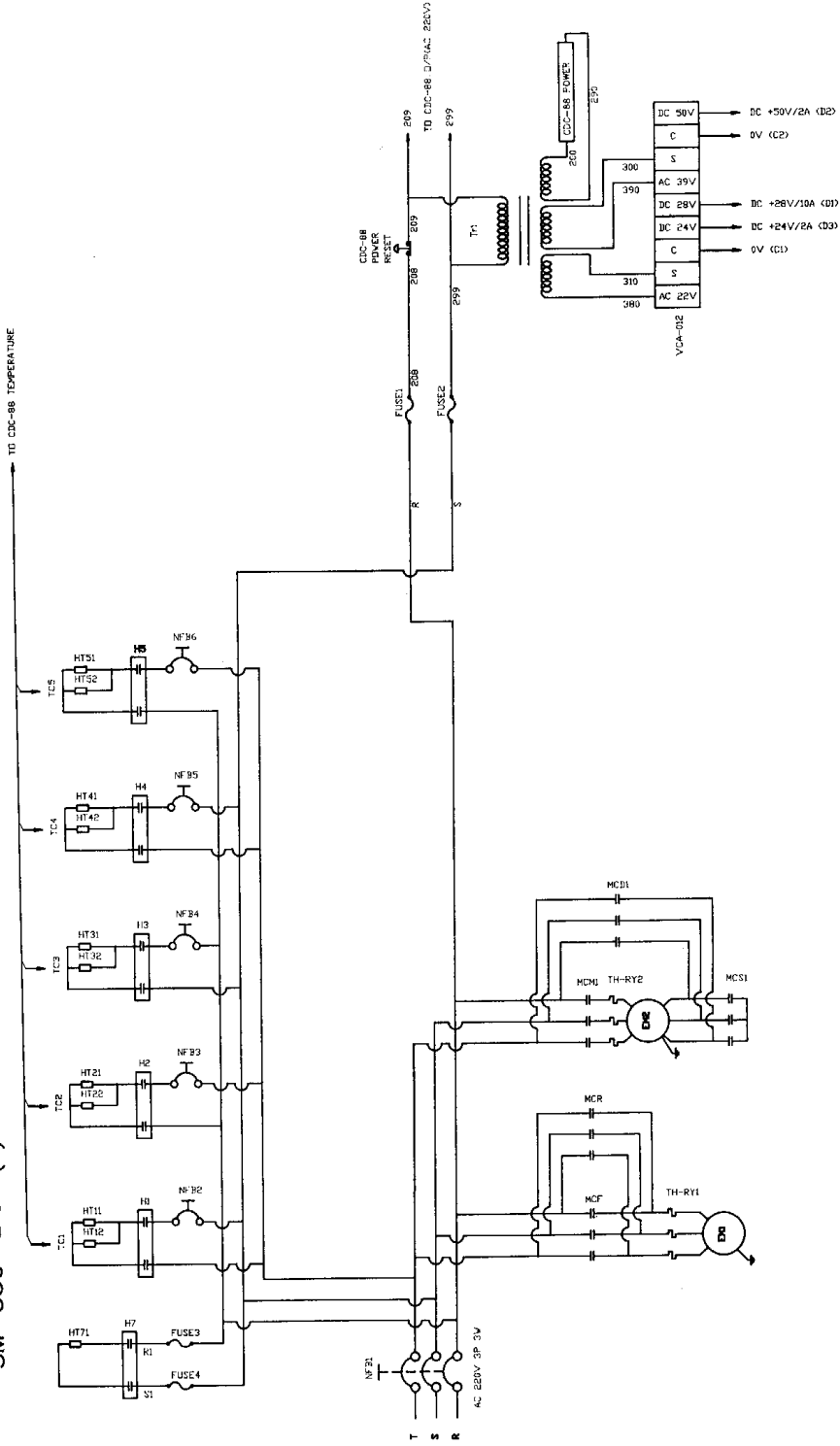
ELEC. BOX LAYOUT
SM-250 電箱配置圖

1993/06/10



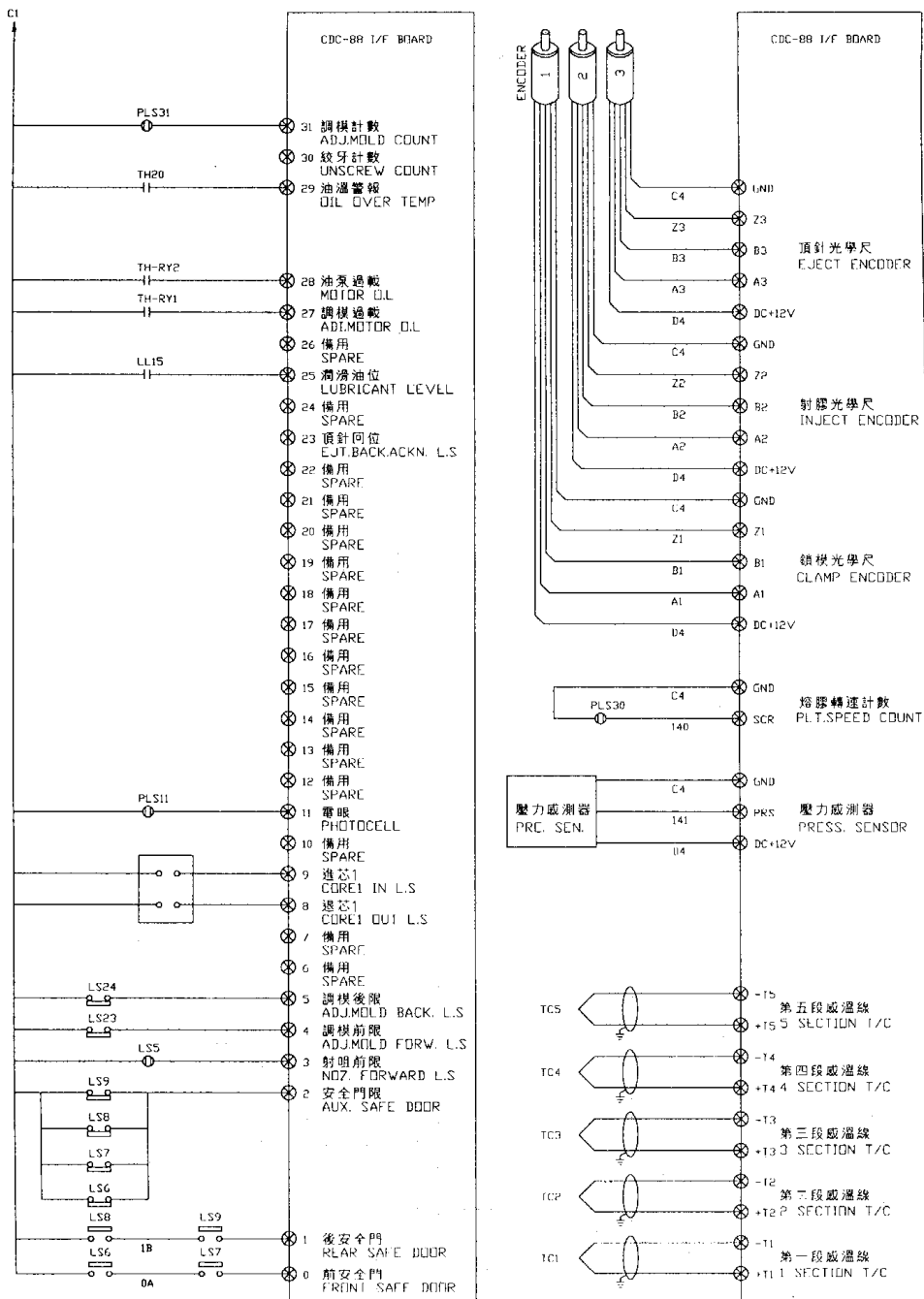
CIRCUIT DIAGRAM (1)
SM-350 電路圖(1)

1993/05/21



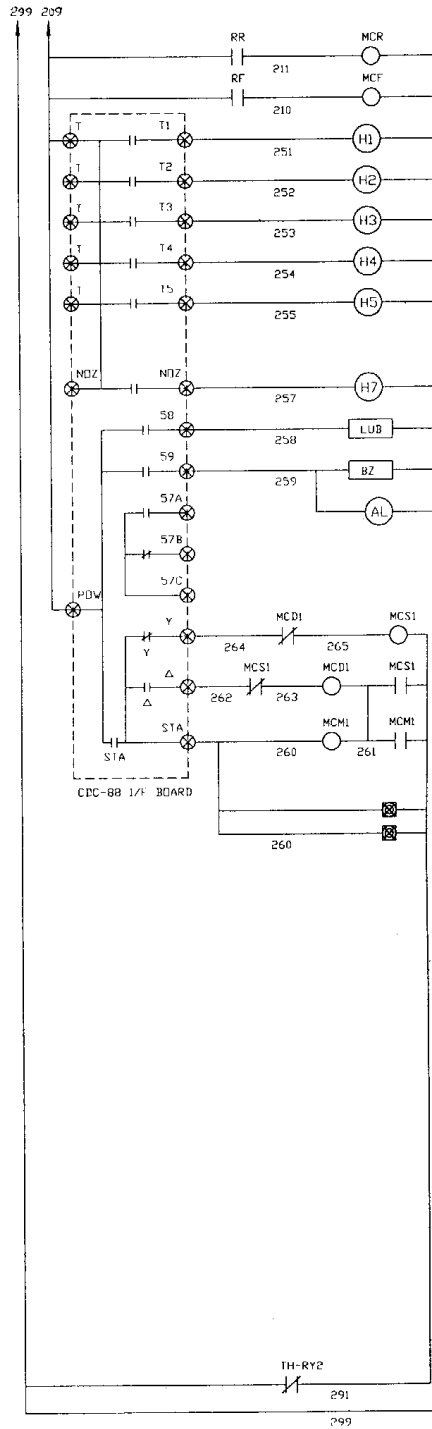
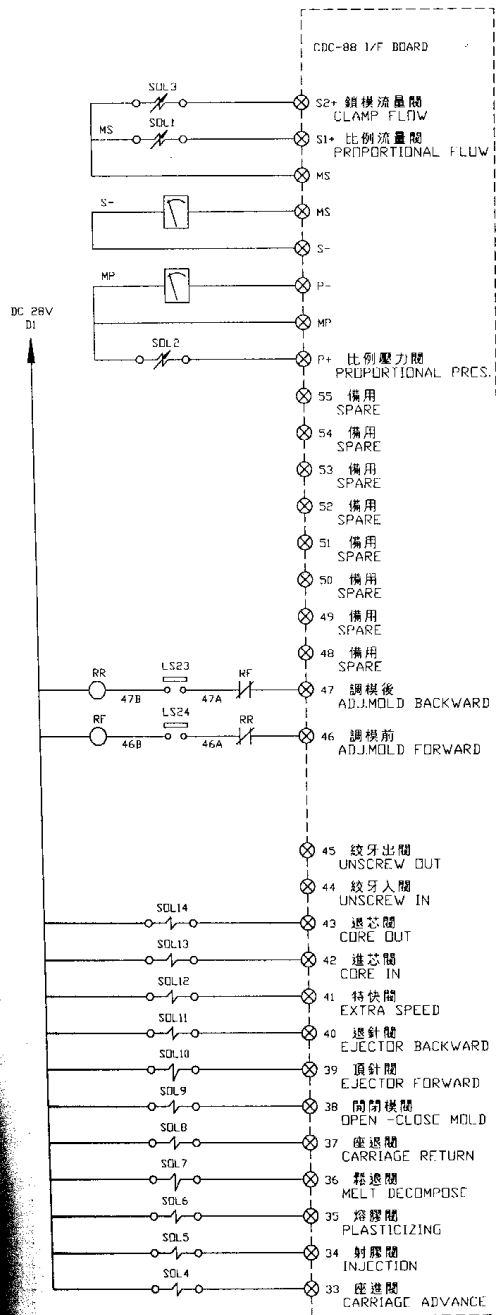
SM-350 電路圖(2)
ELEC. CIRCUIT(2)

1993/06/22



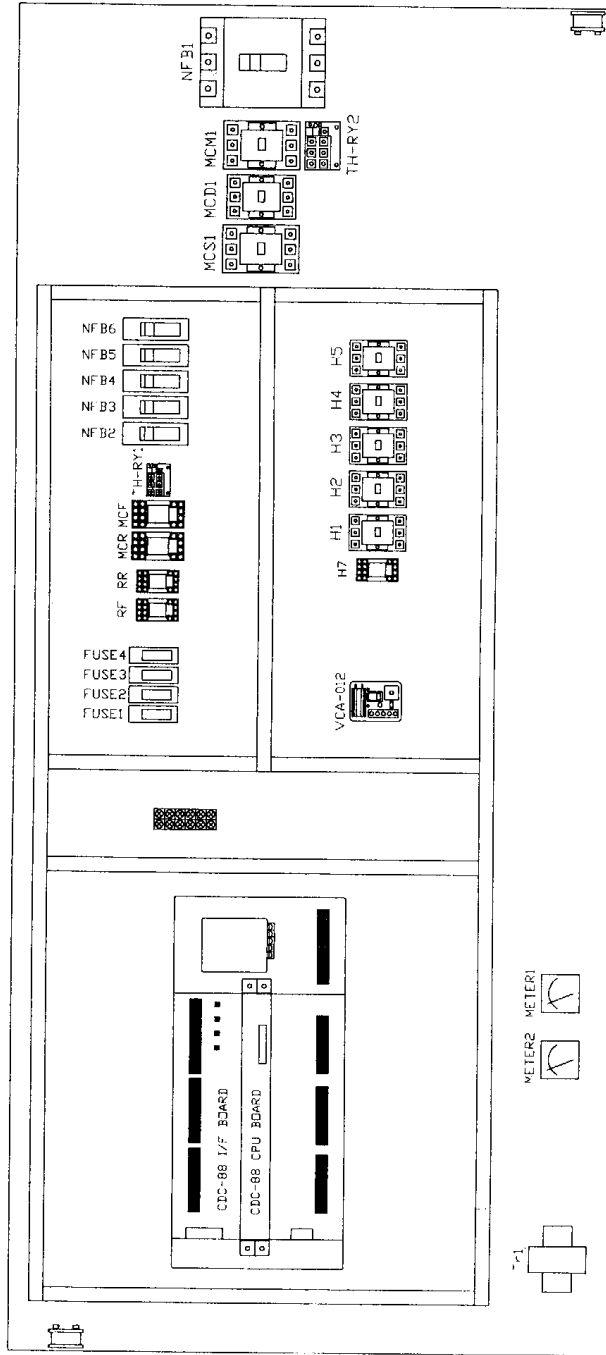
SM-350 電路圖(3)
ELEC. CIRCUIT(3)

1993/06/22



ELEC. BOX LAYOUT

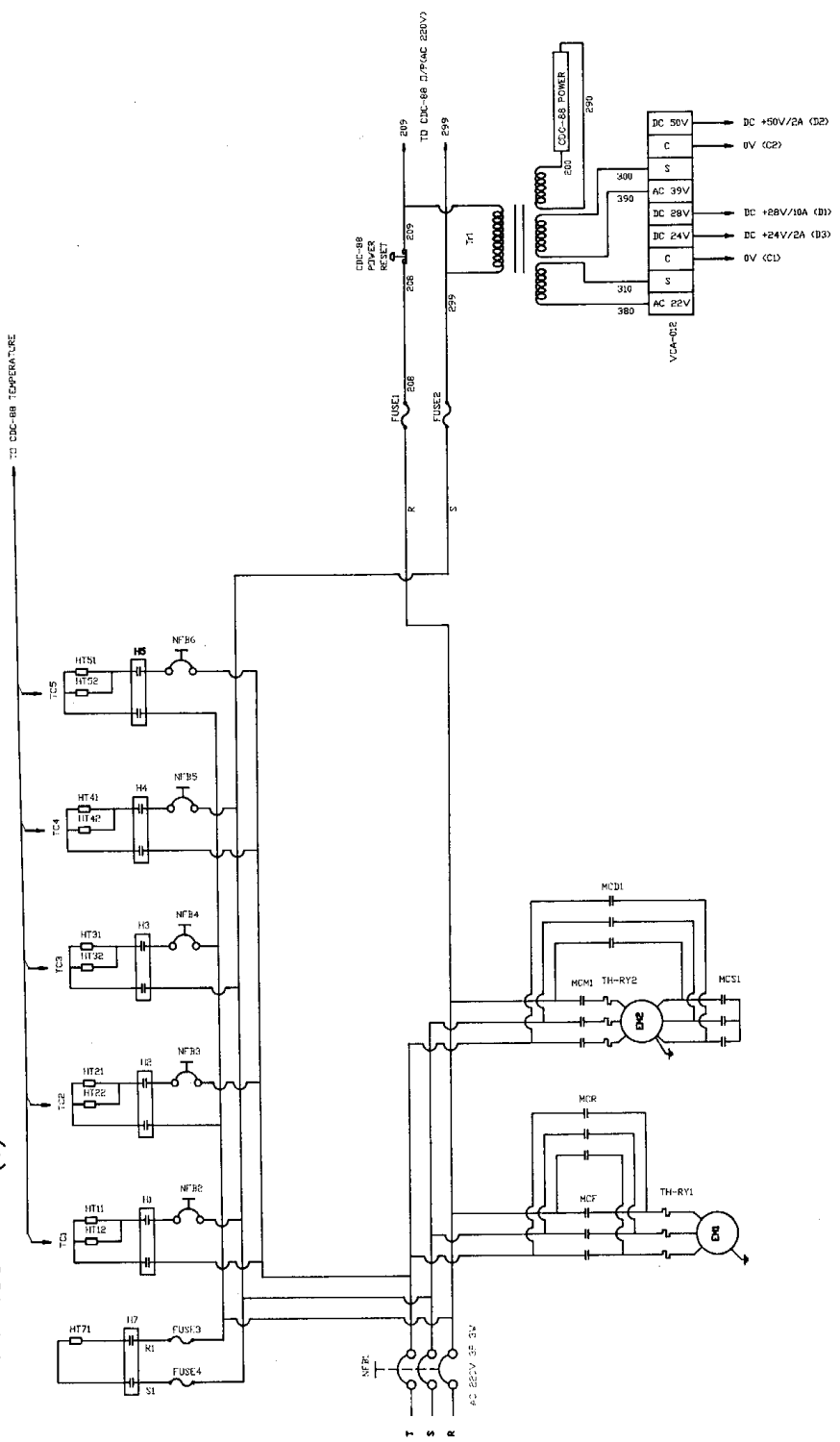
SM-350 電箱配置圖 1993/06/11





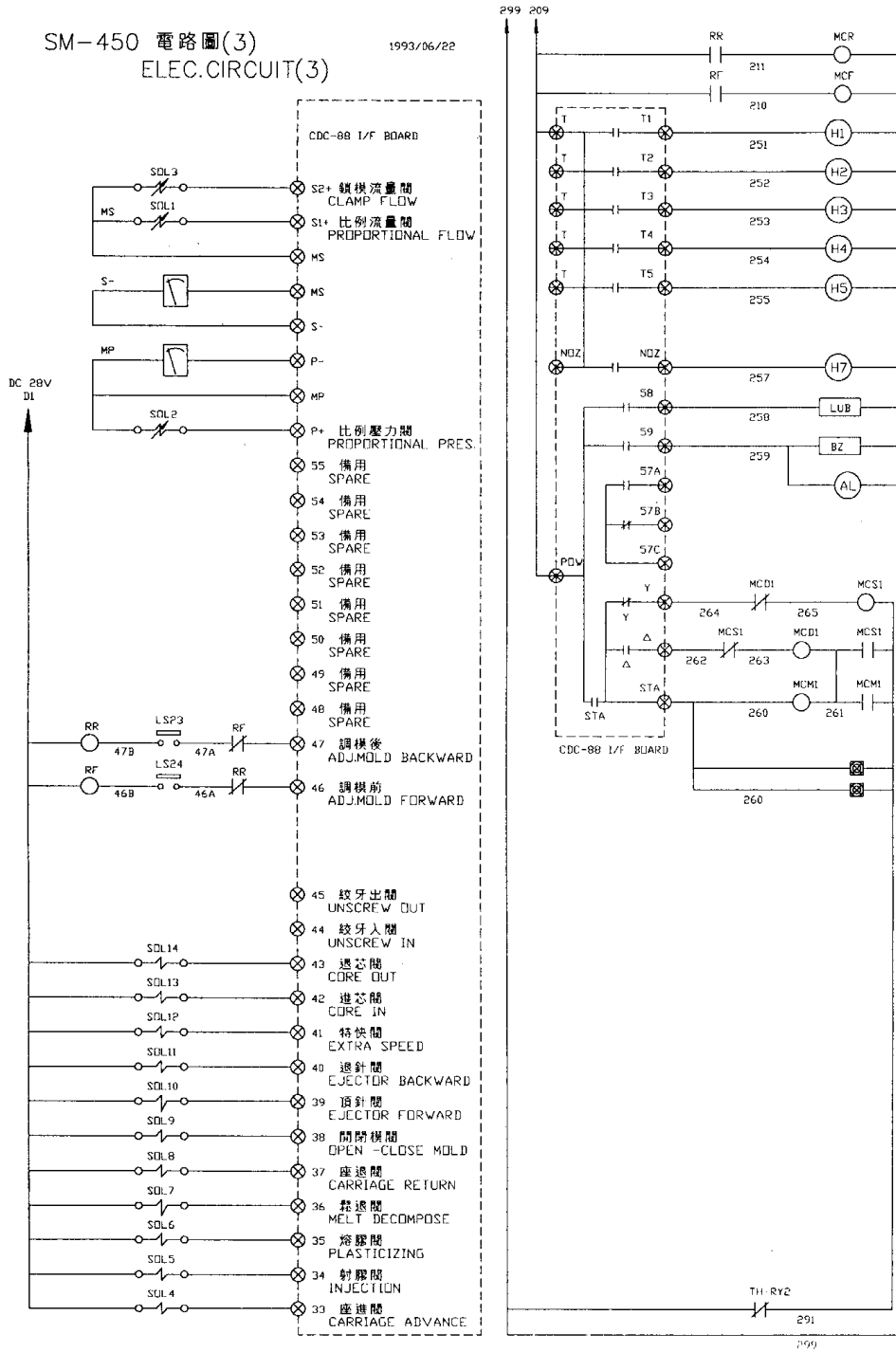
CIRCUIT DIAGRAM (1)
SM-450 電路圖(1)

1953/05/21



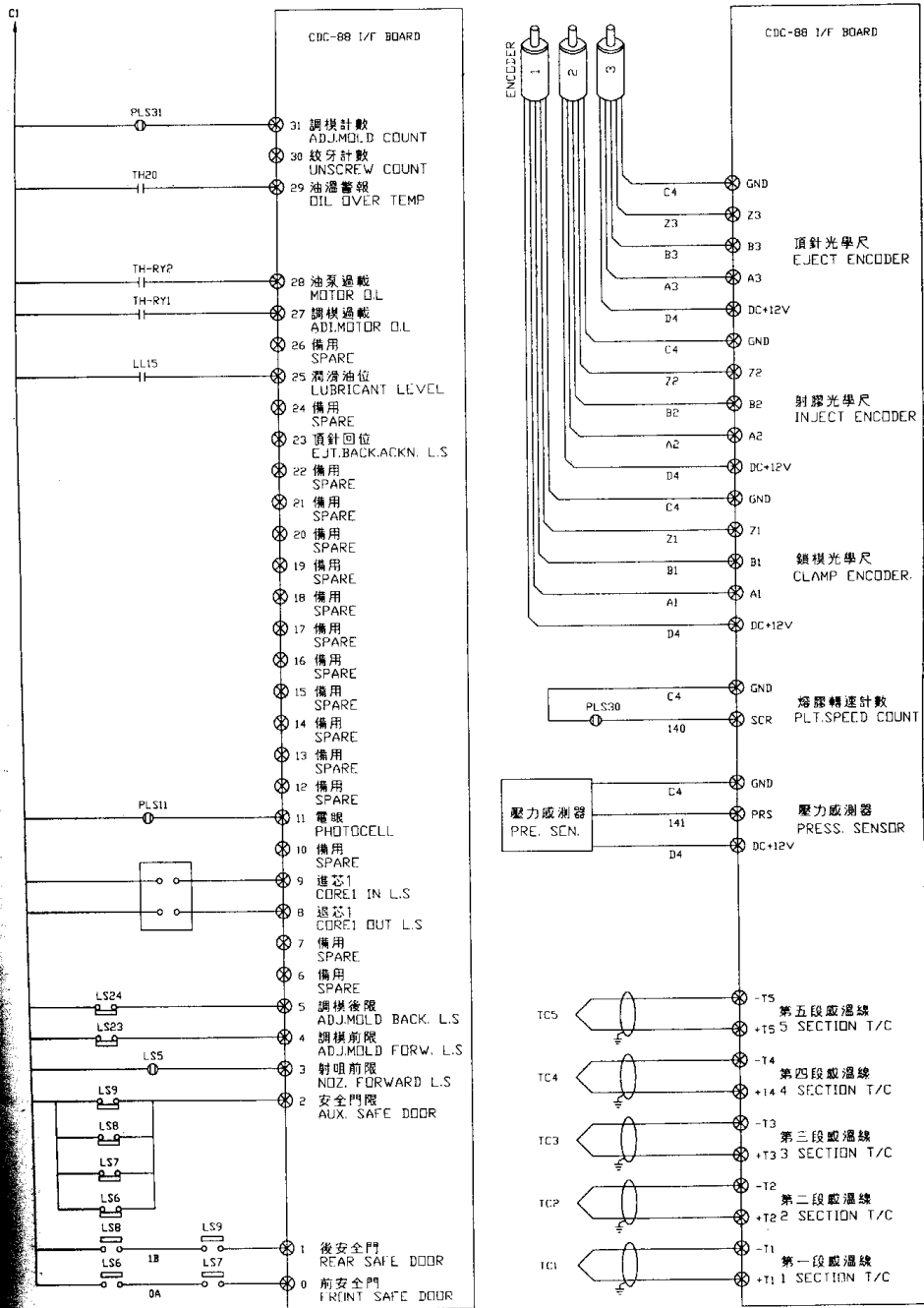
SM-450 電路圖(3)
ELEC.CIRCUIT(3)

1993/06/22



SM-450 電路圖(2)
ELEC.CIRCUIT(2)

1993/05/22



SM-450 電箱配置圖
:993/06/11
ELEC. BOX LAYOUT

