

晶圓廠 TEL OXIDE 爐管降溫 PM 程序

Fab TEL OXIDE Furnace Tube PM Procedure

壹、目的：

I. Purpose:

使機臺維持最佳狀況，降低 DOWN TIME

Keep the machine in the best condition and reduce the DOWN TIME

貳、適用時機：

II. Application timing:

一、P-DEPO(POCL3)：

大PM：200 ± 20 RUN

Big PM：200 ± 20 RUN

二、DRY OXIDE：一年±3個月

DRY OXIDE：One year±3 months

三、WET OXIDE：一年±3個月

WET OXIDE：One year±3 months

四、ALLOY/SOG：一年±3個月

ALLOY/SOG：One year±3 months

五、機臺異常須PM時

When the machine is abnormal shall PM

參、使用材料：

III. Used Material:

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	2
-------	------------	-----------	-----------	--------	---

IPA (異丙醇)、無塵布、O-RING、除銹劑....等。

IPA (isopropyl alcohol), dust-free cloth, O-RING, rust remover....etc.

肆、使用設備：

IV. Used Equipment:

公制六角扳手、活動扳手、"十"字起子....等。

Metric hexagonal wrench, adjustable wrench, "ten" screwdriver...etc.

伍、安全事項：

V. Safety Precautions:

一、石英配件易碎，拆裝請小心，並請於拆裝石英過程，全程配戴棉手套 & 護目鏡，避免遭石英割傷 & 造成眼部傷害。

1. Quartz accessories are fragile, please be careful when disassembling and assembling, and please wear cotton gloves & goggles during the process of disassembling and assembling the quartz to avoid being cut by the quartz and causing eye damage.

二、TUBE 重量不輕，請注意拆裝之安全。

2. Tube is not a light weight, please pay attention to safety of disassembly.

三、TUBE 溫度低於 150°C (面板顯示) 時才可執行拆管，並於拿取 TUBE 時請全程配戴隔熱手套，以避免灼傷。

3. When the temperature of the tube is lower than 150°C (displayed on the panel), the tube can be dismantled. When handling the inner and outer tubes, please wear heat-resistant gloves to avoid burns.

四、請使用手推車搬運內外管於酸房與機臺之間，並將內外管放置於台車上時，請配戴隔熱手套，以避免灼傷。

4. Please use a trolley to carry the inner and outer pipes between the acid room and the machine, and when placing the inner and outer pipes on the platform, please wear heat-resistant gloves to avoid burns.

五、使用化學品，應穿戴防護器具。

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	3
-------	------------	-----------	-----------	--------	---

5. Use chemicals, wear protective equipment

六、POCL3 機台拆管時請全程穿戴黃色乳膠手套。

6. Please wear yellow latex gloves when dismantling the POCL3 machine.

陸、操作步驟：

VI. Operating Procedure:

A. Pocl3 BPM Procedure

一、降溫：關 208V Power 將爐管降溫。

Cool down: Turn off the 208V Power to cool down the furnace tube.

二、以 T-BAWL Run Mode 下之 Dummy Unload 將 Boat 上的 Dummy Wafer 取下後將 M3100 面板上 “On-Line” 燈關閉。

Use Dummy Unload under T-BAWL Run Mode to remove the Dummy Wafer on the Boat and turn off the “On-Line” light on the M3100 panel.

三、將保溫桶及 Dust Tray 等配件取下。

Remove the pedestal and Dust Tray and other accessories.

四、使用 VL-800 Manual Mode 下之 Manual 或 Adjust 的 Motion 5 將 Boat Clamp 鬆開後，將 Boat 取下至酸房清洗。

Use the Manual under VL-800 Manual Mode or Motion 5 of Adjust to loosen the Boat Clamp, then take the Boat down to the acid room for cleaning.

五、為促進降溫速度，於 Manual 或 Adjust 的 Motion 3、Motion 4 移至 Position 2，將 Door Shutter 打開，當溫度降至 150°C 時可進行拆管，步驟如下：

In order to accelerate the cooling speed, move the Motion 3 and Motion 4 of the Manual or Adjust to Position 2, open the Door Shutter, and remove the tube when the temperature drops to 150°C. The steps are as follows:

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	4
-------	------------	-----------	-----------	--------	---

1. 以“十”字起子鬆開遮蓋 Manifold 之 Panel 的螺絲後，取下 Panel。
Loosen the screws covering the Panel of the Manifold with a "Plus" screwdriver, and then remove the Panel.
2. 用“六角板手”以一手固定一手拆卸方式將鬆開固定螺絲後，取下 Door Shutter。
Use the "hexagonal wrench" to fix the door with one hand and remove it with one hand. After loosening the fixing screws, remove the Door Shutter.
3. 拆 Injector、Trap、Exhaust Pipe。
Disassemble the Injector, Trap, and Exhaust Pipe.
4. 將五根 Paddle T/C 的接頭拔起。
Pull out the five Paddle T/C connectors.
 - 4.1 POCL3 T/C 為每 5 次 BPM 後送修校正溫度。
POCL3 T/C Calibration temperature for repair after every 5 BPM.
5. 拆管：

Remove the tube:

 - 5.1 確定 B/E 在 Position 1，然後在 Capping Flange 上放上 Pocl3 爐管專用 Installation Jigs。
Make sure B/E is at Position 1, and then put the Installation Jigs for Pocl3 furnace tubes on the Capping Flange.
 - 5.2 檢查 VL-800 Motion 1 之速度是否為 100，如果不是，則請改成 100。
Check if the speed of VL-800 Motion 1 is 100, if not, please change it to 100.
 - 5.3 將 B/E 往上升至 Installation Jigs 與 Tube Flange 接觸到且 B/E 的彈簧有稍微壓縮現象即停住。
Raise the B/E until the Installation Jigs touch the Tube Flange and the spring of B/E is slightly compressed, then stop.
 - 5.4 以六角板手鬆開固定 Support Ring 的螺絲後，Support Ring 正好套在 Capping Flange 上。
After loosening the screws fixing the Support Ring with a hexagon wrench, the Support Ring fits on the Capping Flange.

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	5
-------	------------	-----------	-----------	--------	---

5.5 將 B/E 慢慢下降可看到 Tube 亦下降，如果卡住可稍微轉動 Tube 使其自然隨 B/E 下降。
Slowly lower the B/E and you can see that the Tube is also lowered. If it is stuck, you can turn the Tube slightly to make it fall naturally with the B/E.

5.6 B/E 降至 Position 1後，將五根 Paddle-T/C拉出，取出 Silica Block，取下Tube 及 Support Ring。

After B/E is lowered to Position 1, pull out the five Paddle-T/C, take out the Silica Block, and remove the Tube and Support Ring.

5.7 將石英配件交由酸房清洗，清洗乾淨後即可進行裝管。

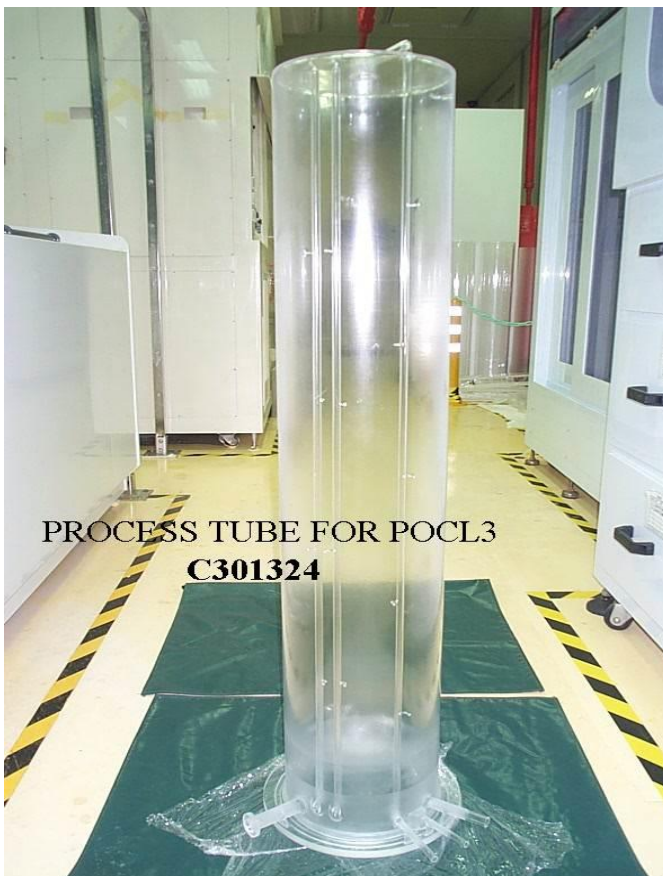
Submit the quartz fittings to the acid room for cleaning, and then install the tubes after cleaning.

六、裝管：

Install tube:

1 步驟與拆管相反。(POCL3 Process Tube 如下圖)

The steps are the reverse of removing the tube. (POCL3 Process Tube as shown below)



NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	6
-------	------------	-----------	-----------	--------	---

2 更換 Tube & 保溫桶後，因 Tube & 保溫桶 是屬 Quartz面接觸，需檢查當B/E

升至 Position 4 位置彈簧壓縮約2 mm (往上頂約0.5 ~ 1圈)，並需做承接水平檢查。

After replacing the Tube & pedestal, because the Tube & pedestal is in Quartz surface contact, it is necessary to check that when B/E is raised to Position 4, the spring is compressed by about 2 mm (up about 0.5 ~ 1 turn), and the level of acceptance needs to be checked examine.

3 裝設 T/C 時須將五根 Paddle T/C 夾至 T/C 紅色標示位置。

When installing the T/C, the five paddle T/C must be clipped to the position marked in red on the T/C.

4 組裝 Injector 時必須將 POCL3 · O2 · N2 DILUTE INLET Teflon Connect 螺帽拆下以

IPA Clean，檢查有無裂痕並以 Air Gun 吹乾潔淨完再行組裝。

When assembling the Injector, the POCL3, O2, N2 DILUTE INLET Teflon Connect nuts must be removed and cleaned with IPA, checked for cracks and dried with an Air Gun before assembling.

5.CLEAN EXHAUST 管路，確認無組塞。

CLEAN EXHAUST tubing, make sure there are no group plugs.



6 裝設 EXHAUST PIPING & TRAY 請將 EXHAUST PIPING 插至接頭底部，若無法插至底，請將接頭更換新品。

Install EXHAUST PIPING & TRAY Please insert EXHAUST PIPING to the bottom of the connector, if it cannot be inserted to the bottom, please replace the connector with a new one.

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	7
-------	------------	-----------	-----------	--------	---



6 裝管注意事項：

Precautions for tube installation:

6.1 POCL3 Tube(C301324 , C301324-99) 拆管時請注意管口左方 Exhaust 支管，

支管前端處有無刻痕，拆下(無刻痕)後請於支管前端刻上 “一” 表示已使用過1次，

PM拆管時若支管上已有 “一” 道刻痕，請於洗管前刻上 “二” ，

若欲拆下Tube支管，已有 “二” 刻號，即通知 EQ 送修更換 Exhaust 支管，

P-DEPO exhaust piping 每次更換外，其餘皆酸洗即可。

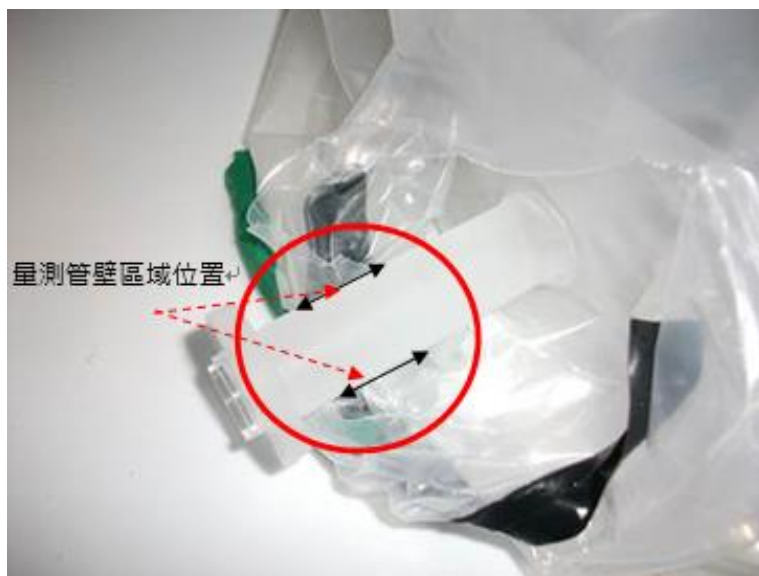
When removing the POCL3 Tube (C301324, C301324-99), please pay attention to the Exhaust branch on the left side of the nozzle, whether there is any nick on the front end of the branch tube, and please engrave "one" on the front end of the branch tube after removal (no nick) to indicate that it has been used 1 Second, if there is a "one" mark on the branch pipe when PM removes the tube, please engrave "two" before cleaning the tube. If you want to remove the Tube branch pipe, if there is a "two" mark, notify EQ to send it for repair and replacement Exhaust branch pipe, P-DEPO exhaust piping is replaced every time, and the rest can be pickled.

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	8
-------	------------	-----------	-----------	--------	---



6.2 裝管前需詳細檢查 Tube 是否破損，尤其注意 Tube 內細管是否完整無破損，裝管前測 Exhaust piping 管壁規格須 $\geq 2.5\text{mm}$ ，才可進行裝管(每次更換 tube 均須測量管壁，量測方式：由 piping 口內推至 flange 處，實際量測 4 個對稱點)，若 exhaust piping 管壁 $\leq 2.4\text{mm}$ ，請更換石英管。

Before installing the tube, it is necessary to check whether the tube is damaged in detail, especially pay attention to whether the thin tube inside the tube is intact and undamaged. Before installing the tube, the specification of the Exhaust piping tube wall must be $\geq 2.5\text{mm}$ before the tube can be installed (the tube wall must be measured every time the tube is replaced. , Measurement method: push from the piping mouth to the flange, and actually measure 4 symmetrical points), if exhaust piping pipe wall $\leq 2.4\text{mm}$, please replace the quartz tube.



NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	9
-------	------------	-----------	-----------	--------	---

6.3 POCL3 PM 需檢查 Tape Heater 並量測電壓值(需在60V ~ 65V) , 如發現有破損或加熱異常請立即更換 , 另需檢查 M-DOT 後方三通閥小氣管(如圖)是否有堵塞現象 , 如有異常請立即更新。

POCL3 PM needs to check the Tape Heater and measure the voltage value (need to be 60V ~ 65V). If there is any damage or abnormal heating, please replace it immediately. Also check whether the small air pipe of the three-way valve behind the M-DOT (as shown in the picture) is blocked. , please update immediately if there is any abnormality.

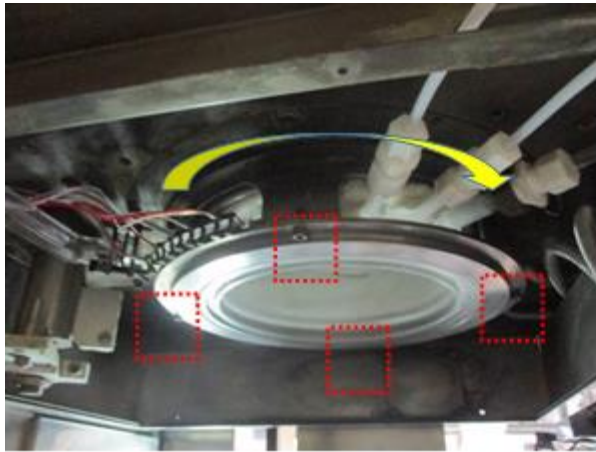


七、安裝 exhaust piping 時需調整 tube 角度 , 防止拉扯應力造成石英破損 , 調整方式如說明 :

調整 Tube 端位置 : 將 Tube Support Ring*4顆螺絲放鬆微調 exhaust piping 左右角度。

When installing exhaust piping, you need to adjust the tube angle to prevent the quartz from being damaged due to pulling stress. The adjustment method is as described in the instructions: Adjust the position of the tube end: Loosen the 4 screws of the Tube Support Ring* and fine-tune the left and right angles of the exhaust piping.

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	10
-------	------------	-----------	-----------	--------	----



將 4 顆固定螺絲稍微放鬆
調整 exhaust piping 角度

八、裝保溫桶、Boat 並調整其承接時晃動程度至最小，然後調整 Fork_5 & Fork_1 Wafer 傳送至正常。(詳細傳送程序，請參考傳送技資，O.I. Number：G3363-1010)

Install the pedestal and Boat and adjust the degree of shaking to the minimum when it is carried, and then adjust the Fork_5 & Fork_1 Wafer to send to normal. (For detailed transmission procedures, please refer to Transmission Technology, O.I. Number: G3363-1010)

九、清理機台上 Cover & Carrier & Stage Assembly & 機台內部周圍環境 (Count / Orient/ Body...)。

Clean the Cover & Carrier & Stage Assembly on the machine and the environment inside the machine (Count / Orient/Body...).

十、升溫至設定溫度後 “START” 燈會閃爍，表示機台在 Standby 狀態。

After the temperature rises to the set temperature, the "START" light will flash, indicating that the machine is in Standby state.

十一、PM完檢查及調整 B/E Driver Voltage (Spec Run / Stop : 0.38 ± 0.04 / 0.18 ± 0.02 V) ，若異常或無法調整請更換新品。

Check and adjust the B/E Driver Voltage (Spec Run / Stop: 0.38 ± 0.04 / 0.18 ± 0.02 V) after PM. If it is abnormal or cannot be adjusted, please replace it with a new one.

十二、有 M-DOT System機台請檢查機台後方 Panel Pressure 是否在 (760 ± 20 PSI) ，若無則作 Pressure Calibrate To In SPEC。

If there is an M-DOT System machine, please check whether the Panel Pressure at the back of the machine is at (760 ± 20 PSI), if not, perform Pressure Calibrate To In SPEC.

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	11
-------	------------	-----------	-----------	--------	----

十三、Profile : Boat 上滿 Wafer 後 Run “ Profile ” Recipe 。

Profile: Run the "Profile" recipe after the Boat is filled with Wafer.

十四、Test Run : 測機平時 Run 貨之程式以量測其阻值，如果合乎規格即可交由生產線 Run 貨，

降溫 PM 工作至此完成。

Test Run: Test the machine' s normal run program to measure its resistance value. If it meets the specifications, it can be delivered to the production line to run the product. The cooling PM work is now completed.

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	12
-------	------------	-----------	-----------	--------	----

B. Dry Oxide YPM Procedure

一、關 208V Power 將爐管降溫。

Turn off 208V Power to cool down the furnace tube.

二、以 T-BAWL Run Mode 下之 Dummy Unload 將 Boat 上的 Dummy Wafer 取下後將 M3100 面板上 “On-Line” 燈關閉。

Use Dummy Unload under T-BAWL Run Mode to remove the Dummy Wafer from the Boat and turn off the “On-Line” light on the M3100 panel.

三、將保溫桶及 Dust Tray 等配件取下。

Remove accessories such as pedestal and Dust Tray.

四、使用 VL-800 Manual Mode 下之 Manual 或 Adjust 的 Motion 5 將 Boat Clamp 鬆開後，將 Boat 取下至酸房清洗。

Use the Manual under VL-800 Manual Mode or Motion 5 of Adjust to loosen the Boat Clamp, then take the Boat down to the acid room for cleaning.

五、為促進降溫速度於 Manual 或 Adjust 的 Motion 3、Motion 4 移至 Position 2 將 Door Shutter 打開，當溫度降至 150°C 時可進行拆管，步驟如下：

In order to accelerate the cooling speed, move the Motion 3 and Motion 4 of Manual or Adjust to Position 2 and open the Door Shutter. When the temperature drops to 150°C, the tube can be removed. The steps are as follows:

1. 以 “十” 字起子鬆開遮蓋 Manifold 之 Panel 的螺絲後，取下 Panel。

Use a "Plus" screwdriver to loosen the screws covering the Panel of the Manifold, and then remove the Panel.

2. 用 “六角扳手” 以一手固定一手拆卸方式將鬆開固定螺絲後，取下 Door Shutter。

Use a "hexagonal wrench" to fix the door with one hand and remove it with one hand. After loosening the fixing screws, remove the Door Shutter.

3. 拆 Gas Exhaust Pipe (A&B)、Gas Connect Piping、Process Tube。

Disassemble Gas Exhaust Pipe (A&B), Gas Connect Piping, Process Tube.

4. 將五根 Paddle-T/C 的接頭拔起。

Pull out the five Paddle-T/C connectors.

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	13
-------	------------	-----------	-----------	--------	----

4.1 OXIDE T/C 為每次 YPM 時(15個月內) 送修校正溫度。

OXIDE T/C is the calibration temperature for each YPM (within 15 months).

5. 拆管：

Remove the tube:

5.1 確定 B/E 在 Position 1，然後在 Capping Flange 上放上Oxide 爐管專用

Installation Jigs。

Make sure B/E is at Position 1, then put the Installation Jigs for Oxide furnace tubes on the Capping Flange.

5.2 檢查 VL-800 Motion 1 之速度是否為 100，如果不是，則請改成 100。

Check if the speed of VL-800 Motion 1 is 100, if not, please change it to 100.

5.3 將 B/E 往上升至 Installation Jigs 與 Tube Flange 接觸到且 B/E 的彈簧有稍微壓縮現象即停住。

Raise the B/E until the Installation Jigs touch the Tube Flange and the spring of B/E is slightly compressed, then stop.

5.4 以六角扳手鬆開固定 Support Ring 的螺絲後，Support Ring 正好套在 Capping Flange 上。

After loosening the screws fixing the Support Ring with a hexagonal wrench, the Support Ring fits on the Capping Flange.

5.5 將 B/E 慢慢下降可看到 Tube 亦下降，如果卡住可稍微轉動 Tube 使其自然隨 B/E 下降。
Slowly lower the B/E and you can see that the Tube is also lowered. If it is stuck, you can turn the Tube slightly to make it fall naturally with the B/E.

5.6 B/E 降至 Position 1後，將五根 Paddle-T/C拉出，取出 Silica Block，取下 Tube 及 Support Ring。

After B/E is down to Position 1, pull out the five Paddle-T/Cs, take out the Silica Block, and take out the Tube and Support Ring.

5.7 將石英配件交由酸房清洗，清洗乾淨後即可進行裝管。

Submit the quartz fittings to the acid room for cleaning, and then install the tubes after cleaning.

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	14
-------	------------	-----------	-----------	--------	----

六、裝管：

Install the tube:

6.1 步驟與拆管相反。(Dry Oxide Process Tube 如下圖)

The steps are the reverse of removing the tube. (Dry Oxide Process Tube as shown below)



PROCESS DOUBLE TUBE FOR T/C
C301370

6.2 更換 Tube & 保溫桶後，因 Tube & 保溫桶 是屬 Quartz 面接觸，需檢查當B/E

升至 Position 4 位置彈簧壓縮約2 mm (往上頂約0.5 ~ 1圈)，並需做承接水平檢查。

After replacing the Tube & pedestal, because the Tube & pedestal

is in Quartz contact, you need to check that when B/E is raised to Position 4, the spring is compressed by about 2 mm (upward about 0.5 ~ 1 turn), and the level of acceptance needs to be checked examine.

6.3 裝設 T/C 時須將五根 Paddle-T/C 夾至 T/C 紅色標示位置。

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	15
-------	------------	-----------	-----------	--------	----

When installing the T/C, the five Paddle-T/C clips must be clipped to the positions marked in red on the T/C.

6.4 組裝 Piping 時必須將 O2 · N2 DILUTE INLET Teflon Connect 螺帽拆下以

IPA Clean · 檢查有無裂痕並以 Air Gun 吹乾潔淨完再行組裝。

When assembling the Piping, the O2, N2 DILUTE INLET Teflon Connect nuts must be removed and cleaned with IPA, checked for cracks and dried with an Air Gun before assembling.

6.5 EXHAUST PIPING 請將 PIPING 插至接頭底部 · 若無法插至底 · 請將接頭更換新品 · 並且於 TFFLON BELLOW 加裝 6.5CM 防縮護套。

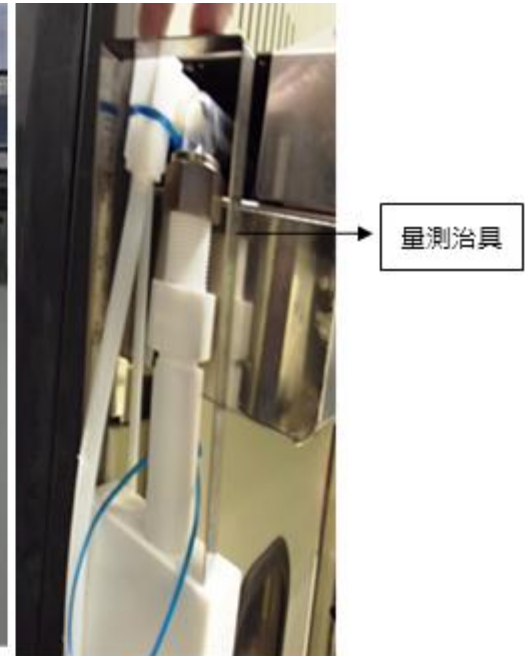
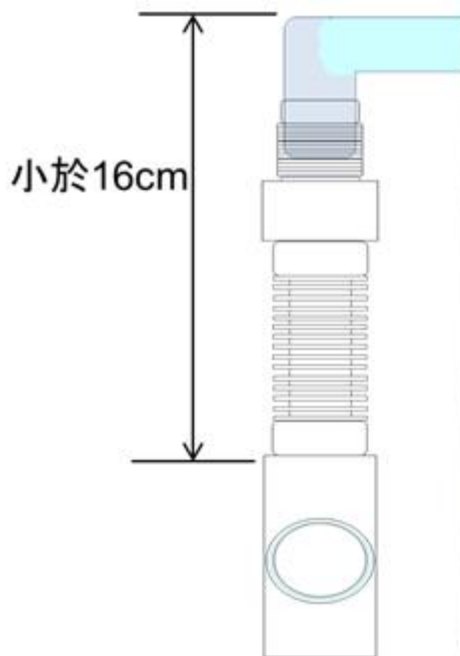
EXHAUST PIPING Please insert the PIPING to the bottom of the connector, if it cannot be inserted to the bottom, please replace the connector with a new one, and install a 6.5CM shrink-proof sheath on the TFFLON BELLOW.



6.6 PIPING 至 BELLOW 底座間距不得高於 16CM · 請使用治具檢查是否OK。

The distance between PIPING and BELLOW base should not be higher than 16CM, please use a jig to check if it is OK.

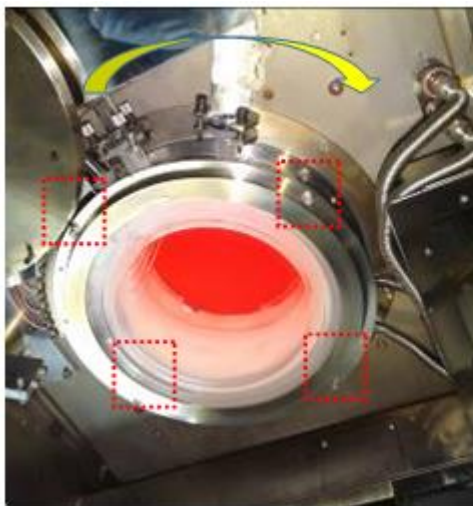
NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	16
-------	------------	-----------	-----------	--------	----



七、安裝 exhaust piping 時需調整 tube 角度，防止拉扯應力造成石英破損，調整方式如說明：
When installing exhaust piping, you need to adjust the angle of the tube to prevent damage to the quartz caused by pulling stress. The adjustment method is as follows:

1. 調整 Tube 端位置：將 Tube Support Ring*4顆螺絲放鬆微調 exhaust piping 左右角度。

Adjust the position of the Tube end: loosen the 4 screws of the Tube Support Ring* and fine-tune the left and right angles of the exhaust piping.



將 4 顆固定螺絲稍微放鬆
調整 exhaust pipe 角度

八、裝保溫桶、Boat 並調整其承接時晃動程度至最小，然後調整 Fork_5 & Fork_1 Wafer 傳送至

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	17
-------	------------	-----------	-----------	--------	----

正常。(詳細傳送程序，請參考傳送技資，O.I. Number：G3363-1010)

Install the pedestal and Boat and adjust the degree of shaking to the minimum when it is carried, and then adjust the Fork_5 & Fork_1 Wafer to send to normal. (For detailed transmission procedures, please refer to Transmission Technology, O.I. Number: G3363-1010)

九、清理機台上 Cover & Carrier & Stage Assembly & 機台內部周圍環境 (Count / Orient/ Body...)。

Clean the Cover & Carrier & Stage Assembly on the machine and the environment inside the machine (Count / Orient/Body...).

十、升溫至設定溫度後 “START” 燈會閃爍，表示機台在 Standby 狀態。

After the temperature rises to the set temperature, the "START" light will flash, indicating that the machine is in Standby state.

十一、PM完檢查及調整 B/E Driver Voltage (Spec Run / Stop : 0.38 ± 0.04 / $0.18 \pm 0.02V$)，若異常或無法調整請更換新品。

Check and adjust the B/E Driver Voltage (Spec Run / Stop: 0.38 ± 0.04 / $0.18 \pm 0.02V$) after PM. If it is abnormal or cannot be adjusted, please replace it with a new one.

十二、在完成YPM 後，使用無刮傷wafer測試。

After completing YPM, test with non-scratch wafer.

程序：

Procedure:

1. 將測試wafer 放置於C1~C6 cassette slot21~25，每個cassette 5片wafer，6 個 cassette 共30 片。

Place test wafers in C1~C6 cassette slots 21~25, 5 wafers per cassette, 30 wafers in total for 6 cassettes.

2. Manual load C1~C6，將wafer 傳至boat 然後傳回，至Surface Scan check map 是否有fork 刮痕。

Manual load C1~C6, transfer the wafer to the boat and then return, to the Surface Scan check map to see if there are fork scratches.

- 2-1. 確認無fork 刮痕後於網頁交接紀錄C1~C6 PTC out 顆數，交回產線復機。

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	18
-------	------------	-----------	-----------	--------	----

After confirming that there is no fork scratch, record the number of C1~C6 PTC out on the web page, and return it to the production line for restart.

2-2. 確認有fork 刮痕，需debug 後，把有刮痕的M/W 換掉，再重新執行上述2-1. 動作直至確認無fork 刮痕才可交回產線復機。

After confirming that there are fork scratches and need to debug, replace the scratched M/W, and then perform the above 2-1. Actions until it is confirmed that there are no fork scratches before sending it back to the production line for restart.

十三、測機 LK 時若 Thickness O.O.C/O.O.S，請更換 P28 O-ring 並且檢查石英是否正常，並依 O.I 規範須加作測機以 CV Particle data C/P 為主，以示測機後爐管內部之潔淨度正常。
If the thickness is O.O.C/O.O.S when testing the LK machine, please replace the P28 O-ring and check whether the quartz is normal, and add it according to the O.I specification. normal.

十四、Profile：Boat 上滿 Wafer 後 Run “ Profile ” Recipe。

Profile: Run the "Profile" recipe after the Boat is filled with Wafer.

十五、Test Run：測機平時 Run 貨之程式以量測其厚度、CV 值等，如果合乎規格即可交由生產線 Run 貨，降溫 PM 工作至此完成。

Test Run: The program that the machine usually runs to measure its thickness, CV value, etc. If it meets the specifications, it can be delivered to the production line to run the product, and the cooling PM work is now completed.

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	19
-------	------------	-----------	-----------	--------	----

C. Wet Oxide YPM Procedure

- 一、關 208V Power 將爐管降溫。

Turn off the 208V Power to cool down the furnace tube.

- 二、以 T-BAWL Run Mode 下之 Dummy Unload 將 Boat 上的 Dummy Wafer 取下後將 M3100 面板上 "On-Line" 燈關閉。

Use Dummy Unload under T-BAWL Run Mode to remove the Dummy Wafer from the Boat and turn off the "On-Line" light on the M3100 panel.

- 三、將保溫桶及 Dust Tray 等配件取下。

Remove accessories such as pedestal and Dust Tray.

- 四、使用 VL-800 Manual Mode 下之 Manual 或 Adjust 的 Motion 5 將 Boat Clamp 鬆開後，將 Boat 取下至酸房清洗。

Use the Manual under VL-800 Manual Mode or Motion 5 of Adjust to loosen the Boat Clamp, then take the Boat down to the acid room for cleaning.

- 五、為促進降溫速度於 Manual 或 Adjust 的 Motion 3、Motion 4 移至 Position 2 將 Door Shutter 打開，當溫度降至 150°C 時可進行拆管，步驟如下：

In order to accelerate the cooling speed, move the Motion 3 and Motion 4 of Manual or Adjust to Position 2 and open the Door Shutter. When the temperature drops to 150 °C, the tube can be removed. The steps are as follows:

1. 以 "十" 字起子鬆開遮蓋 Manifold 之 Panel 的螺絲後，取下 Panel。

Use a "Plus" screwdriver to loosen the screws covering the Panel of the Manifold, and then remove the Panel.

2. 用 "六角扳手" 以一手固定一手拆卸方式將鬆開固定螺絲後，取下 Door Shutter。

Use a "hexagonal wrench" to fix the door with one hand and remove it with one hand. After loosening the fixing screws, remove the Door Shutter.

3. 拆 GAS Exhaust Piping (A&B)、Quartz Torch、Gas Intake Piping、Process Tube。

Remove GAS Exhaust Piping (A&B), Quartz Torch, Gas Intake Piping, Process Tube.

4. 將五根 Paddle-T/C 的接頭拔起。

Pull out the five Paddle-T/C connectors.

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	20
-------	------------	-----------	-----------	--------	----

4.1 OXIDE T/C 為每次 YPM 時(15個月內) 送修校正溫度。

OXIDE T/C is the calibration temperature for each YPM (within 15 months).

5. 拆管：

Remove the tube:

5.1 確定 B/E 在 Position 1，然後在 Capping Flange 上放上Oxide 爐管專用 Installation Jigs。

Make sure B/E is at Position 1, then put Oxide on the Capping Flange Installation Jigs。

5.2 檢查 VL-800 Motion 1 之速度是否為 100，如果不是，則請改成 100。

Check if the speed of VL-800 Motion 1 is 100, if not, please change it to 100.

5.3 將 B/E 往上升至 Installation Jigs 與 Tube Flange 接觸到且 B/E 的彈簧有稍微壓縮現象即停住。

Raise the B/E until the Installation Jigs touch the Tube Flange and the spring of B/E is slightly compressed, then stop.

5.4 以六角扳手鬆開固定 Support Ring 的螺絲後，Support Ring 正好套在 Capping Flange 上。

After loosening the screws fixing the Support Ring with a hexagonal wrench, the Support Ring fits on the Capping Flange.

5.5 將 B/E 慢慢下降可看到 Tube 亦下降，如果卡住可稍微轉動 Tube 使其自然隨 B/E 下降。

Slowly lower the B/E and you can see that the Tube is also lowered. If it is stuck, you can turn the Tube slightly to make it fall naturally with the B/E.

5.6 B/E 降至 Position 1後，將五根 Paddle-T/C(有些高溫管無)拉出，取出 Silica Block，

取下 Tube 及 Support Ring。

After B/E is lowered to Position 1, pull out the five Paddle-T/C (some high-temperature tubes do not), take out the Silica Block, and remove the Tube and Support Ring.

5.7 將石英配件交由酸房清洗，清洗乾淨後即可進行裝管。

Submit the quartz fittings to the acid room for cleaning, and then install the

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	21
-------	------------	-----------	-----------	--------	----

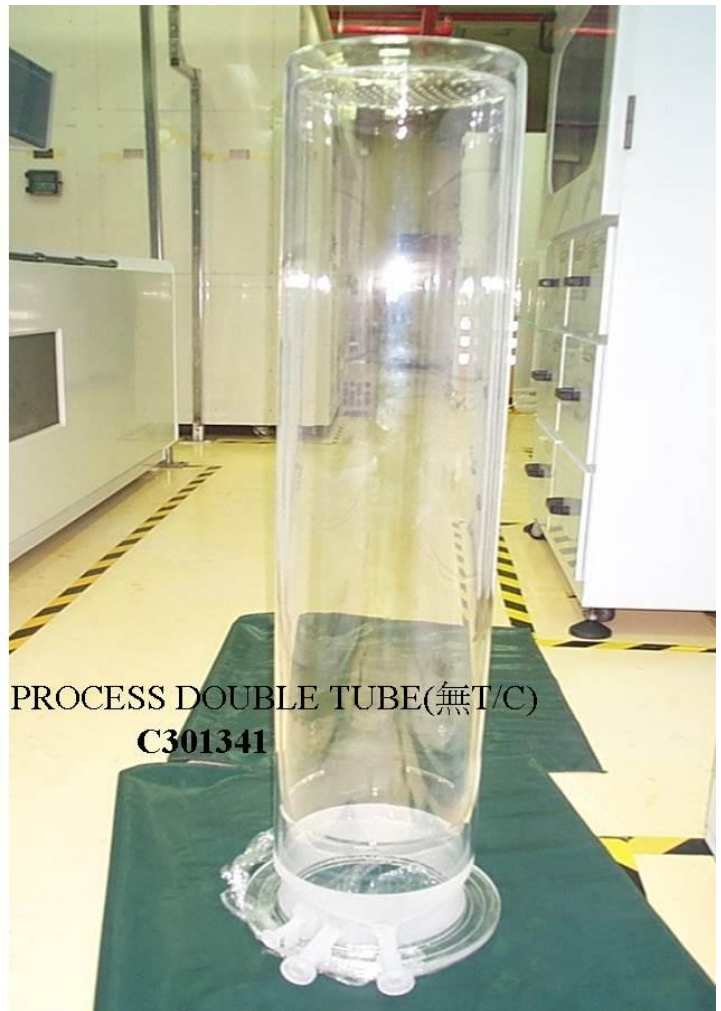
tubes after cleaning.

六、裝管：

Install the tube:

6.1 步驟與拆管相反。(Wet Oxide Procee Tube 如下圖，部份高溫管無 T/C)

The steps are the reverse of removing the tube. (Wet Oxide Procee Tube as shown in the picture below, some high temperature tubes have no T/C)



6.2 更換 Tube & 保溫桶後，因 Tube & 保溫桶 是屬 Quartz面接觸，需檢查當B/E

升至 Position 4 位置彈簧壓縮約2 mm (往上頂約0.5 ~ 1圈)，並需做承接水平檢查。

After replacing the Tube & pedestal, because the Tube & pedestal

is in Quartz surface contact, it is necessary to check that when B/E is

raised to Position 4, the spring is compressed by about 2 mm (up about 0.5 ~ 1

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	22
-------	------------	-----------	-----------	--------	----

turn), and the level of acceptance needs to be checked examine.

6.3 裝設 T/C 時須將五根 Paddle-T/C 夾至 T/C 紅色標示位置。

When installing the T/C, the five Paddle-T/C clips must be clipped to the positions marked in red on the T/C.

6.4 組裝 Torch 時必須將 H2 · O2 · N2 DILUTEINLET Teflon Connect 螺帽拆下以

IPA Clean · 檢查有無裂痕並以 Air Gun 吹乾潔淨完再行組裝。

When assembling the Torch, the H2, O2, N2 DILUTEINLET Teflon Connect nuts must be removed and cleaned with IPA, checked for cracks and dried with an Air Gun before assembling.

6.5 EXHAUST PIPING 請將 PIPING 插置接頭底部，若無法插至底，請將接頭更換新品，並且於 TFFLON BELLOW 加裝 6.5CM 防縮護套。

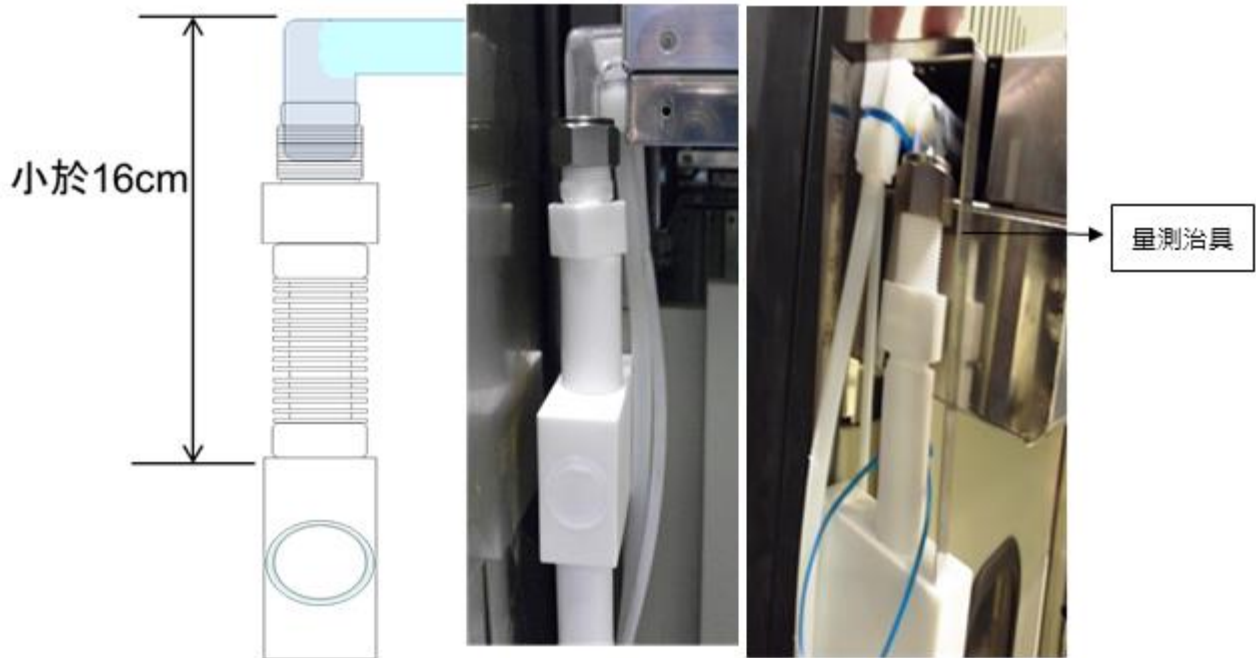
EXHAUST PIPING Please insert the PIPING into the bottom of the connector. If it cannot be inserted to the bottom, please replace the connector with a new one, and install a 6.5CM shrink-proof sheath on the TFFLON BELLOW.



6.6 PIPING至BELLOW底座間距不得高於16CM，請使用治具檢查是否OK。

The distance between PIPING and BELLOW base should not be higher than 16CM, please use a jig to check whether it is OK.

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	23
-------	------------	-----------	-----------	--------	----



七、Gate Oxide 製程機台 Torch Heater 每五年更換一次

(需更換日期西元 2025、2030、2035、2040... 以此類推)

Gate Oxide process machine Torch Heater is replaced every five years

(Need to replace the date AD 2025, 2030, 2035, 2040...and so on)

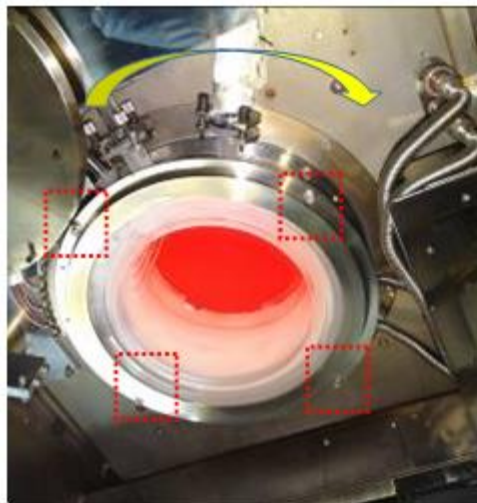
八、安裝 intak piping 時需調整 tube 及 torch 角度，防止拉扯應力造成石英破損，調整方式如說明：

When installing intak piping, you need to adjust the angle of the tube and torch to prevent damage to the quartz caused by pulling stress. The adjustment method is as follows:

1. 調整 Tube 端位置：將 Tube Support Ring*4顆螺絲放鬆微調 Tube piping 左右角度。

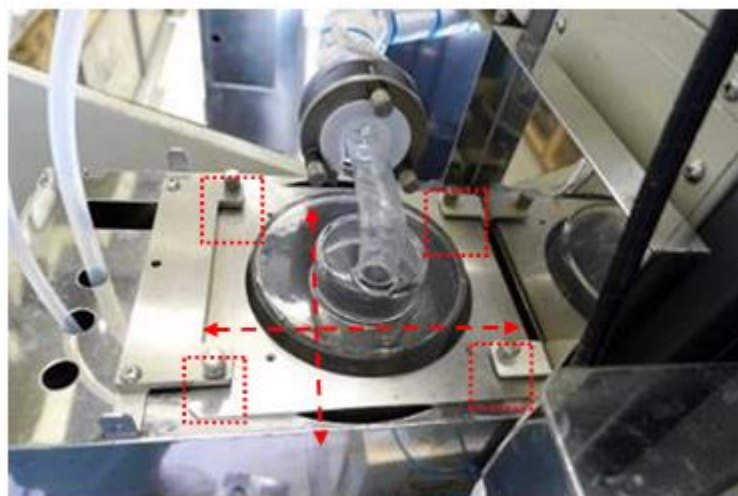
Adjust the position of the Tube end: Loosen the 4 screws of the Tube Support Ring* and fine-tune the left and right angles of the Tube piping.

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	24
-------	------------	-----------	-----------	--------	----



將 4 顆固定螺絲稍微放鬆
調整 tube inlet pipe 角度

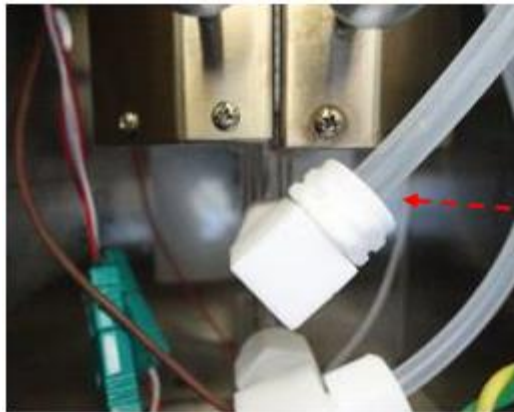
2. 調整 Torch 端位置：將 Torch 固定板*4顆螺絲放鬆可以微調 Torch 前後左右角度。
Adjust the position of the Torch end: Loosen the 4 screws of the Torch fixing plate to fine-tune the angle of the Torch.



將 4 顆固定螺絲放鬆
調整 Torch 前後左右位置

3. 調整 Torch 端上下位置：於 Torch heater 後方固定桿調整上下螺絲。
To adjust the up and down position of the torch end: Adjust the up and down screws on the fixing rod behind the torch heater.

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	25
-------	------------	-----------	-----------	--------	----



於 Torch heater 後方固定桿
調整螺絲調整 Torch 上下位置

九、裝保溫桶、Boat 並調整其承接時晃動程度至最小，然後調整 Fork_5 & Fork_1 Wafer 傳送至正常。(詳細傳送程序，請參考傳送技資，O.I. Number：G3363-1010)

Install the pedestal and Boat and adjust the degree of shaking to the minimum when it is carried, and then adjust the Fork_5 & Fork_1 Wafer to send to normal. (For detailed transmission procedures, please refer to Transmission Technology, O.I. Number: G3363-1010)

十、清理機台上 Cover & Carrier & Stage Assembly & 機台內部周圍環境 (Count / Orient/ Body...)。

Clean the Cover & Carrier & Stage Assembly on the machine and the environment inside the machine (Count / Orient/Body...).

十一、升溫至設定溫度後 “START” 燈會閃爍，表示機台在 Standby 狀態。

After the temperature rises to the set temperature, the "START" light will flash, indicating that the machine is in Standby state.

十二、PM完成後請確認 M340 Panel of DSW Display SW-01 / SW-S參數須與(圖一)說明相同若不同請修改之。

After finishing the PM, please confirm that the parameters of M340 Panel of DSW Display SW-01 / SW-S must be the same as those in (Figure 1), if they are different, please modify them.

12.1 check M340 panel SW-01 v3 valve要設定：1 (N2 Purge Line Valve)

check M340 panel SW-01 v3 valve to be set: 1 (N2 Purge Line Valve)

12.2 SW-01 MFC-01要設定：1 (N2 Purge Line MFC)

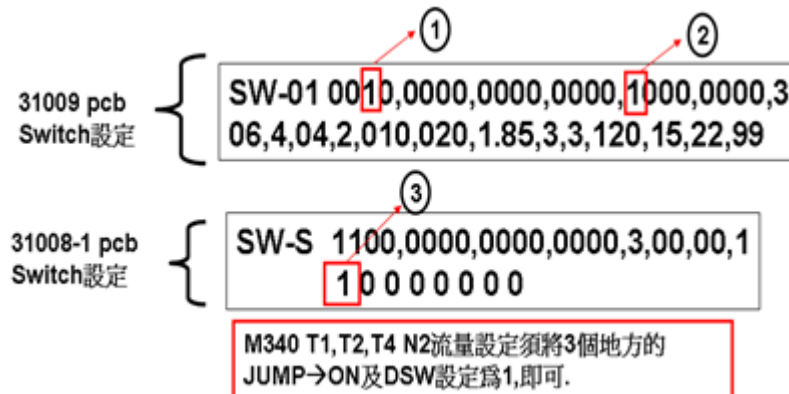
NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	26
-------	------------	-----------	-----------	--------	----

SW-01 MFC-01 to be set: 1 (N2 Purge Line MFC)

12.3 SW-S MFC-01 INIT flow要設定 : 1 (N2 Purge Line Flow)

SW-S MFC-01 INIT flow to be set: 1 (N2 Purge Line Flow)

(圖一)



十三、PM完檢查及調整 B/E Driver Voltage (Spec Run / Stop : 0.38 ± 0.04 / 0.18 ± 0.02 V) · 若異常或無法調整請更換新品。

Check and adjust the B/E Driver Voltage (Spec Run / Stop: 0.38 ± 0.04 / 0.18 ± 0.02 V) after PM. If it is abnormal or cannot be adjusted, please replace it with a new one.

十四、Gate Oxide 製程機台需確認 ATCS controller 有 alarm & ATCS controller power off 時，M3100 面板會有 ATCS alarm。

The Gate Oxide process machine needs to confirm that ATCS controller has an alarm & when ATCS controller power is off, there will be an ATCS alarm on the M3100 panel.



NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	27
-------	------------	-----------	-----------	--------	----

十五、YPM 後需測試 flame sensor 功能，氫氧點火失敗 HEC pyro controller 是否會 alarm，機台是否會正常執行 ABORT recipe。

After YPM, it is necessary to test the flame sensor function, whether the HEC pyro controller will alarm if the hydrogen-oxygen ignition fails, and whether the machine will execute the ABORT recipe normally.

十六、YPM 後需檢測氫氧點火成功所需時間，並修改之 (Poly Oxide & BPSG Flow 機組則免)
After YPM, it is necessary to detect the time required for the successful ignition of hydrogen and oxygen and modify it (Poly Oxide & BPSG Flow units are exempt)

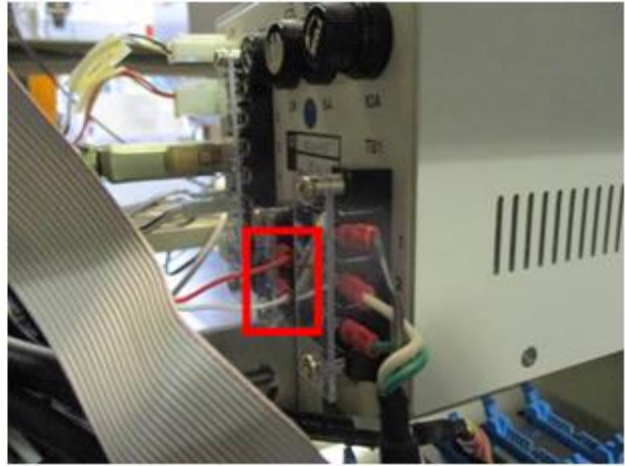
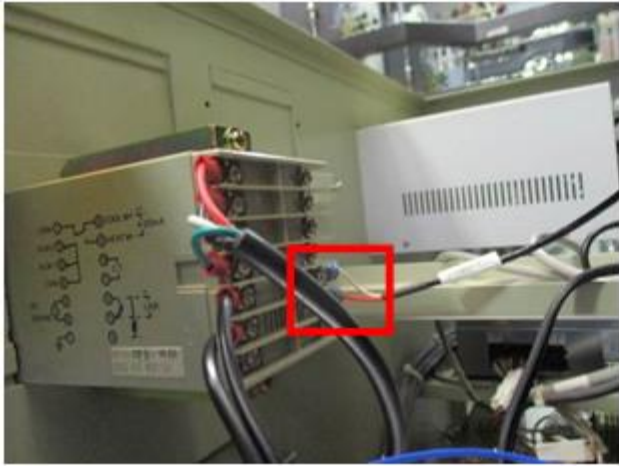
規則：計算氫氧點火程序 T3 步驟開始 → HEC pyro controller 上 flame 燈號亮起之時間，並將該時間 +5秒後，重新輸入至 T3。

Rule: Calculate the time from the start of step T3 of the hydrogen-oxygen ignition program → the flame light on the HEC pyro controller lights up, and re-enter this time + 5 seconds into T3.

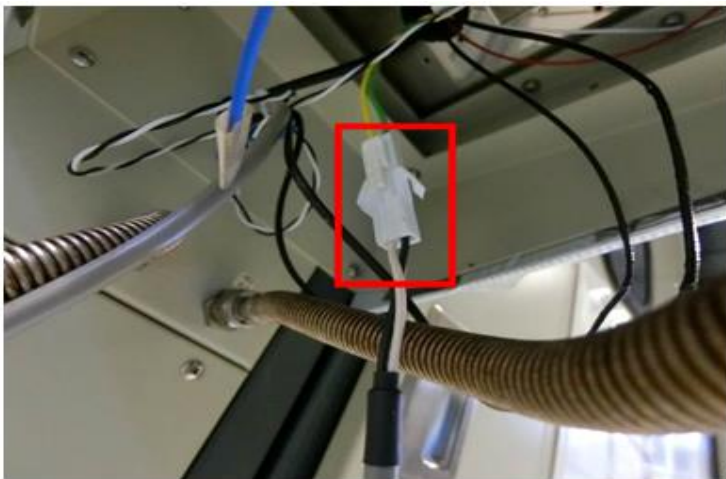


十七、YPM 後需確認 Torch heater T/C 線是否有接處不良之狀況發生，若有異常則需處理改善之。
After YPM, it is necessary to confirm whether the T/C line of the Torch heater is badly connected. If there is any abnormality, it needs to be dealt with and improved.

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	28
-------	------------	-----------	-----------	--------	----



十八、YPM 後需確認 flame sensor connector 是否有接處不良之狀況發生，若有異常則需處理改善之。
After YPM, it is necessary to confirm whether there is any bad connection of the flame sensor connector. If there is any abnormality, it needs to be dealt with and improved.



十九、在完成YPM 後，使用無刮傷wafer測試。
After completing YPM, test with non-scratch wafer.

程序：

Procedure:

1. 將測試wafer 放置於C1~C6 cassette slot21~25，每個cassette 5片wafer，6 個 cassette 共30 片。
Place test wafers in C1~C6 cassette slots 21~25, 5 wafers per cassette, 30 wafers in total for 6 cassettes.
2. Manual load C1~C6，將wafer 傳至boat 然後傳回，至Surface Scan check map

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	29
-------	------------	-----------	-----------	--------	----

是否有fork 刮痕。

Manual load C1~C6, transfer the wafer to the boat and then return, to the Surface Scan check map to see if there are fork scratches.

2-1. 確認無fork 刮痕後於網頁交接紀錄C1~C6 PTC out 顆數，交回產線復機。

After confirming that there is no fork scratch, record the number of C1~C6 PTC out on the web page, and return it to the production line for restart.

2-2. 確認有fork 刮痕，需debug 後，把有刮痕的M/W 換掉，再重新執行上述2-1.

動作直至確認無fork 刮痕才可交回產線復機。

After confirming that there are fork scratches and need to debug, replace the scratched M/W, and then re-execute the above 2-1. Operation until it is confirmed that there are no fork scratches before sending it back to the production line for restart.

二十、測機 LK 時若 Thickness O.O.C/O.O.S，請更換 P28 & P42 O-ring並且檢查石英

(Tube Injector / Torch / Piping) 是否正常，並依 O.I 規範須加作測機以 CV Particle data C/P 為主，以示測機後爐管內部之潔淨度正常。

If the thickness is O.O.C/O.O.S when testing the LK machine, please replace the P28 & P42 O-ring and check whether the quartz (Tube Injector / Torch / Piping) is normal. According to the O.I specification, it must be added as the test machine to CV Particle data C/P. In order to test the cleanliness inside the furnace tube after the machine is normal.

二十一、Profile：Boat 上滿 Wafer 後 Run “ Profile ” Recipe (如為 Well D-Fusion 高溫尚須

於 B/E 升至 Position 4 時裝上 Paddle-T/C 並於 Profile 結束後，拆下並將 Pedestal 更換)。

Profile: Run "Profile" Recipe after the boat is filled with Wafer (for Well D-Fusion high temperature, the Paddle-T/C must be installed after B/E is raised to Position 4, and after the Profile ends, remove and replace the Pedestal) .

二十二、Test Run：測機平時 Run 貨之程式以量測其厚度、CV 值等，如果合乎規格即可交由生

產線 Run貨，降溫 PM 工作至此完成。

Test Run: The program that the machine usually runs to measure its thickness, CV value,

NO. :	G3363-0102	VERSION :	<u><i>AE</i></u>	PAGE :	30
-------	------------	-----------	------------------	--------	----

etc. If it meets the specifications, it can be delivered to the production line to run the product, and the cooling PM work is now completed.

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	31
-------	------------	-----------	-----------	--------	----

D. Alloy/Curing YPM Procedure

一、降溫：關 208V Power 將爐管降至室溫。

Cool down: Turn off the 208V Power to cool down the furnace tube to room temperature.

二、以 T-BAWL Run Mode 下之 Dummy Unload 將 Boat 上的 Dummy Wafer 取下後將 M3100 面板上 “On-Line” 燈關閉。

Use Dummy Unload under T-BAWL Run Mode to remove the Dummy Wafer from the Boat and turn off the “On-Line” light on the M3100 panel.

三、將保溫桶及 Dust Tray 等配件取下。

Remove accessories such as the pedestal and Dust Tray.

四、使用 VL-800 Manual Mode 下之 Manual 或 Adjust 的 Motion 5 將 Boat Clamp 鬆開後，將 Boat 取下至酸房清洗。

Use the Manual under VL-800 Manual Mode or Motion 5 of Adjust to loosen the Boat Clamp, then take the Boat down to the acid room for cleaning.

五、為促進降溫速度於 Manual 或 Adjust 的 Motion 3、Motion 4 移至 Position 2 將 Door Shutter 打開，當溫度降至 150°C 時可進行拆管，步驟如下：

In order to accelerate the cooling speed, move the Motion 3 and Motion 4 of Manual or Adjust to Position 2 and open the Door Shutter. When the temperature drops to 150°C, the tube can be removed. The steps are as follows:

1. 以 “十” 字起子鬆開遮蓋 Manifold 之 Panel 的螺絲後，取下 Panel。

Use a "Plus" screwdriver to loosen the screws covering the Panel of the Manifold, and then remove the Panel.

2. 用 “六角扳手” 以一手固定一手拆卸方式將鬆開固定螺絲後，取下 Door Shutter。

Use a "hexagonal wrench" to fix the door with one hand and remove it with one hand. After loosening the fixing screws, remove the Door Shutter.

3. 拆 GAS Exhaust Piping (N2)、Gas Connect Piping、Process Tube。

Dismantle GAS Exhaust Piping (N2), Gas Connect Piping, Process Tube.

4. 將五根 Paddle-T/C 的接頭拔起，Alloy/Curing T/C 為每次 YPM 時(15個月內) 送修校正溫度。

Pull out the joints of the five Paddle-T/C, and send Alloy/Curing T/C to correct the

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	32
-------	------------	-----------	-----------	--------	----

temperature for each YPM (within 15 months).

5. 拆管：

Remove the tube:

5.1 確定 B/E 在 Position 1，然後在 Capping Flange 上放上Oxide 爐管專用 Installation Jigs。

Make sure B/E is at Position 1, then put the Installation Jigs for Oxide furnace tubes on the Capping Flange.

5.2 檢查 VL-800 Motion 1 之速度是否為 100，如果不是，則請改成 100。

Check if the speed of VL-800 Motion 1 is 100, if not, please change it to 100.

5.3 將 B/E 往上升至 Installation Jigs 與 Tube Flange 接觸到且 B/E 的彈簧有稍微壓縮現象即停住。

Raise the B/E until the Installation Jigs touch the Tube Flange and the spring of B/E is slightly compressed, then stop.

5.4 以六角扳手鬆開固定 Support Ring 的螺絲後，Support Ring 正好套在 Capping Flange 上。

After loosening the screws fixing the Support Ring with a hexagonal wrench, the Support Ring fits on the Capping Flange.

5.5 將 B/E 慢慢下降可看到 Tube 亦下降，如果卡住可稍微轉動 Tube 使其自然隨 B/E 下降。

Slowly lower the B/E and you can see that the Tube is also lowered. If it is stuck, you can turn the Tube slightly to make it fall naturally with the B/E.

5.6 B/E 降至 Position 1後，將五根 Paddle-T/C拉出，取出 Silica Block，取下 Tube 及 Support Ring。

After B/E is down to Position 1, pull out the five Paddle-T/Cs, take out the Silica Block, and take out the Tube and Support Ring.

5.7 將石英配件交由酸房清洗，清洗乾淨後即可進行裝管。

Submit the quartz fittings to the acid room for cleaning, and then install the tubes after cleaning.

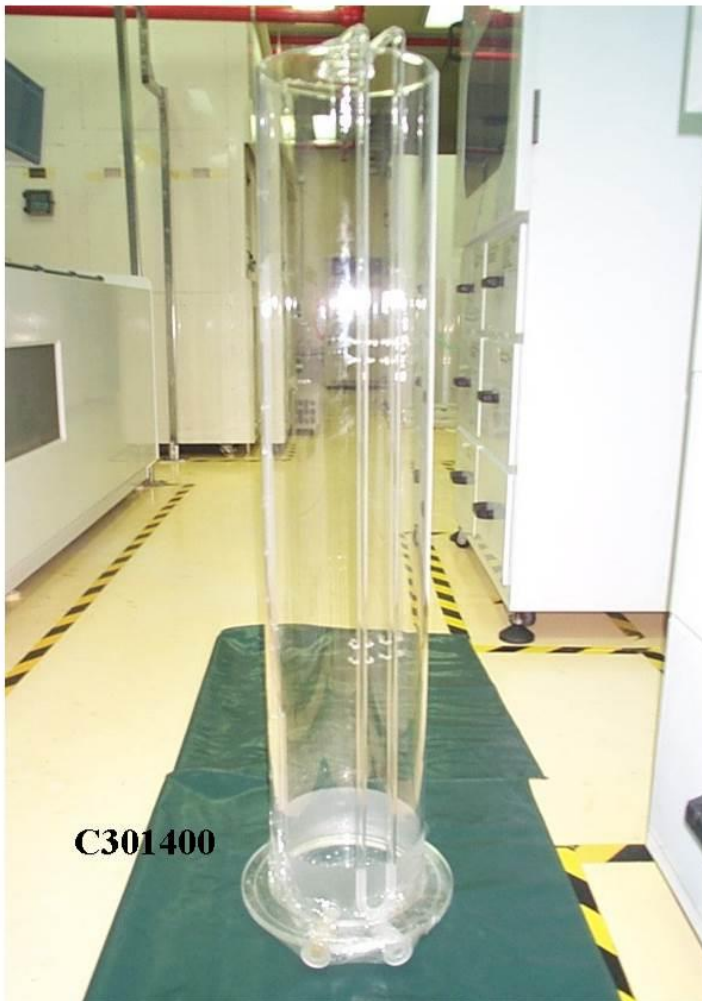
NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	33
-------	------------	-----------	-----------	--------	----

六、裝管：

Install the tube:

6.1 步驟與拆管相反。(Alloy/Curing Process Tube如下圖)

The steps are the reverse of removing the tube. (Alloy/Curing Process Tube as shown below)



6.2 更換 Tube & 保溫桶後，因 Tube & 保溫桶 是屬 Quartz面接觸，需檢查當B/E

升至 Position 4 位置彈簧壓縮約2 mm (往上頂約0.5 ~ 1圈)，並需做承接水平檢查。

(使用Tube 為 C301400 單層管)

After replacing the Tube & pedestal, because the Tube & pedestal is a Quartz surface contact, it is necessary to check that when B/E is raised to Position 4, the spring is compressed by about 2 mm (upward about 0.5 ~ 1 turn), and the level of acceptance needs to be checked examine.

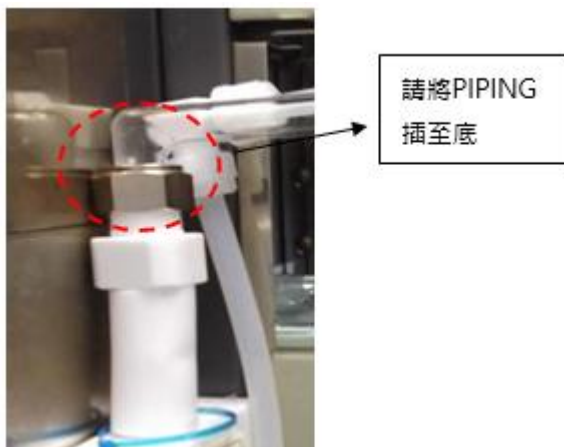
NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	34
-------	------------	-----------	-----------	--------	----

(Use Tube as C301400 single-layer tube)

6.3 裝設 T/C 時須將五根 Paddle-T/C 夾至 T/C 紅色標示位置，Alloy / Curing使用有紅色標示牌之Paddle T/C。

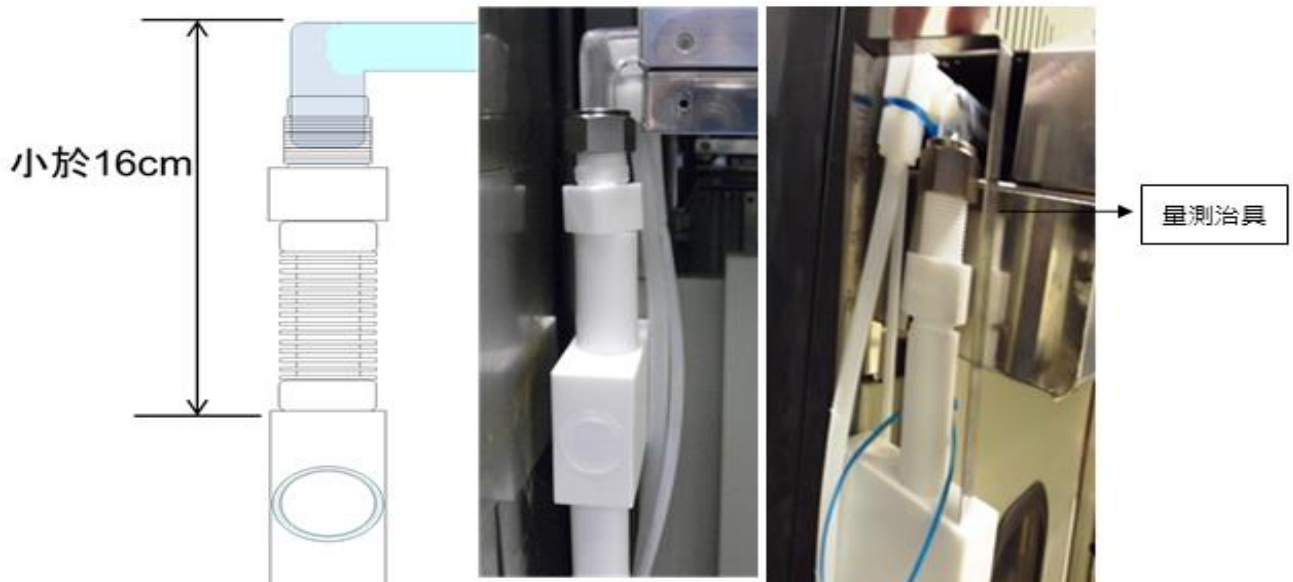
When installing the T/C, five Paddle-T/Cs must be clipped to the red marked position of the T/C. Alloy/Curing use the Paddle T/C with the red marked plate.

6.4 裝設 EXHAUST PIPING 請將 PIPING 插至接頭底部，若無法插至底，請將接頭更換新品。
Install EXHAUST PIPING Please insert the PIPING to the bottom of the connector, if it cannot be inserted to the bottom, please replace the connector with a new one.



6.5 EXHAUST PIPING 至 BELLOW 底座間距不得高於 16CM，請使用治具檢查是否OK。

The distance between EXHAUST PIPING and BELLOW base should not be higher than 16CM, please use a jig to check whether it is OK.

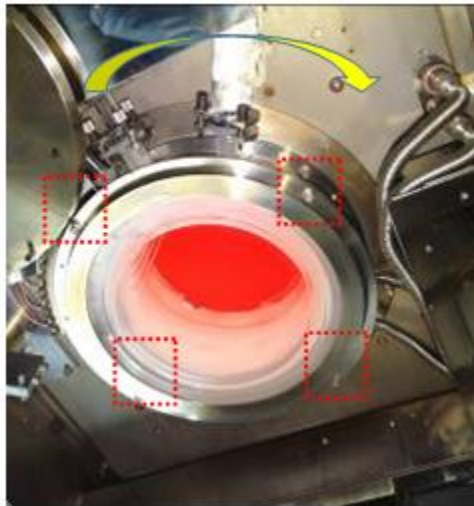


NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	35
-------	------------	-----------	-----------	--------	----

6.6 安裝 EXHAUST PIPING 時需調整 tube 角度，防止拉扯應力造成石英破損，

可調整 Tube 端位置：將 Tube Support Ring*4顆螺絲放鬆微調 piping 左右角度。

When installing EXHAUST PIPING, you need to adjust the tube angle to prevent the quartz from being damaged due to pulling stress. You can adjust the position of the Tube end: Loosen the 4 screws of the Tube Support Ring* and fine-tune the left and right angles of the piping.



將 4 顆固定螺絲稍微放鬆
調整 EXHAUST PIPING 角度

七、裝 Dust Tray(鎖上黑色橡膠氣密環)、保溫桶、Boat 並調整其交接時晃動程度至最小，然後調整 Fork_5 & Fork_1 Wafer 傳送至正常。(詳細傳送程序，請參考傳送技資，O.I. Number: G3363-1010)
Install the Dust Tray (lock the black rubber air-tight ring), pedestall, and Boat, and adjust the degree of shaking to the minimum when transferring them, and then adjust Fork_5 & Fork_1 Wafer to send to normal. (For detailed transmission procedures, please refer to Transmission Technology, O.I. Number: G3363-1010)

八、清理機台上 Cover & Carrier & Stage Assembly & 機台內部周圍環境 (Count / Orient/ Body...)。

Clean the Cover & Carrier & Stage Assembly on the machine and the environment inside the machine (Count / Orient/Body...).

九、升溫至設定溫度後 “START” 燈會閃爍，表示機台在 Standby 狀態。

After the temperature rises to the set temperature, the "START" light will flash, indicating that the machine is in Standby state.

十、PM完檢查及調整 B/E Driver Voltage (Spec Run / Stop : 0.38 ± 0.04 / 0.18 ± 0.02 V)，若異常或無

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	36
-------	------------	-----------	-----------	--------	----

法調整請更換新品。

Check and adjust the B/E Driver Voltage (Spec Run / Stop: 0.38 ± 0.04 / $0.18 \pm 0.02V$) after PM.
If it is abnormal or cannot be adjusted, please replace it with a new one.

十一、在完成YPM 後，使用無刮傷wafer測試。

After completing YPM, test with non-scratch wafer.

程序：

Procedure:

1. 將測試wafer 放置於C1~C6 cassette slot21~25，每個cassette 5片wafer，6 個cassette 共30 片。

Place test wafers in C1~C6 cassette slots 21~25, 5 wafers per cassette, 30 wafers in total for 6 cassettes.

2. Manual load C1~C6，將wafer 傳至boat 然後傳回，至Surface Scan check map 是否有fork 刮痕。

Manual load C1~C6, transfer the wafer to the boat and then return, to the Surface Scan check map to see if there are fork scratches.

- 2-1. 確認無fork 刮痕後於網頁交接紀錄C1~C6 PTC out 顆數，交回產線復機。

After confirming that there is no fork scratch, record the number of C1~C6 PTC out on the web page, and return it to the production line for restart.

- 2-2. 確認有fork 刮痕，需debug 後，把有刮痕的M/W 換掉，再重新執行上述2-1. 動作直至確認無fork 刮痕才可交回產線復機。

After confirming that there are fork scratches and need to debug, replace the scratched M/W, and then re-execute the above 2-1. Operation until it is confirmed that there are no fork scratches before sending it back to the production line for restart.

十二、Test Run：Alloy、Curing 測機使用 C05 程式測機，以量測厚度(EDC控片)、PTC(PTC控片)

等，如果合乎規格即可交由生產線 Run貨，降溫 PM 工作至此完成。

Test Run: The Alloy and Curing measuring machines use the C05 program measuring machine to measure the thickness (EDC control sheet), PTC (PTC control sheet), etc. If they meet the specifications, they can be delivered to the production line for Run, and the

NO. :	G3363-0102	VERSION :	<u>AE</u>	PAGE :	37
-------	------------	-----------	-----------	--------	----

cooling PM work is now completed.

柒、生效與修訂

VII. Effective with Amendment

本規範之公佈實施及其修訂核准層級皆依會簽/核決/分發依循範例為之。

The publication and implementation of this Code and its revised approval level are governed by the signing / approval / distribution follow-up example.