

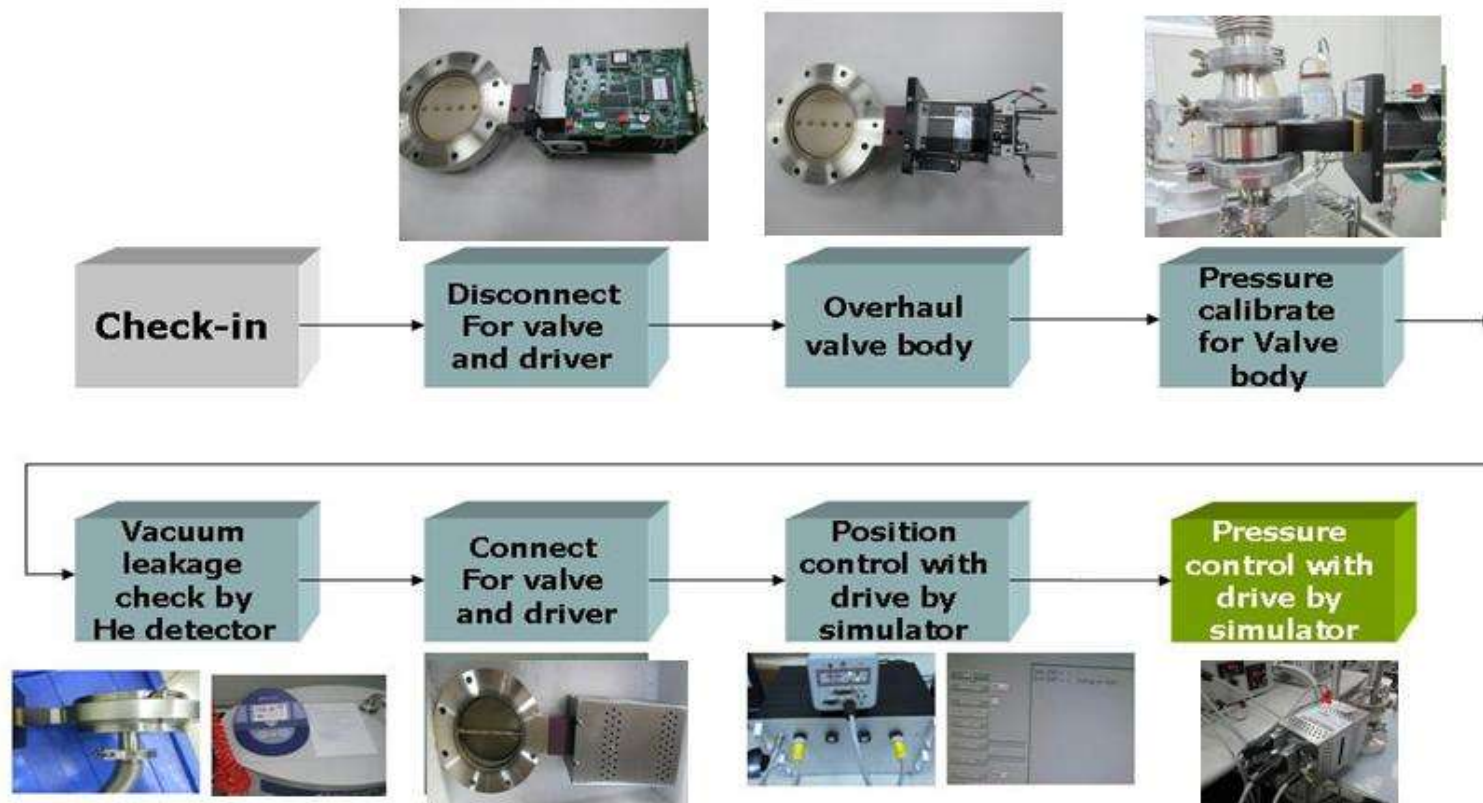
# MKS T3BIA throttle valve overhaul project

## ➤ 產品基本資料:

- ✓ Process chamber of flow able machine.
- ✓ Factory P/N : T3BIA-30984



## ➤ Overhaul flow:

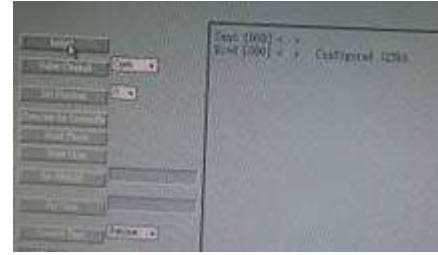


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## ➤ Final test :



Vacuum leakage check



PCB function test

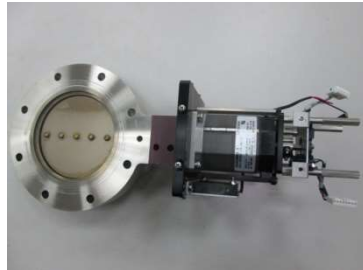


On-line test

# MKS T3BIA throttle valve overhaul project

## ➤ C.O.A (Certificate of Analysis)

- ✓ Motor motion to open/close cycle and eye check motion smooth or not.
- ✓ Record the open/close optimize speed.
- ✓ Record the encode 誤差值. ( within 0.2%)



Connect valve and PCB



Computer control

Axis Select

Axis-1    Axis-2    **Axis-3**    Axis-4

現在位置  Encoder位置  Error  Home 正極限 Home 電壓

Clear

基本參數設定

開始速度  Pulse/S

最高速度  Pulse/S

加減速時間  Pulse/S/S

比例值

動作完成Delay  Second

單動步進量設定

步進值

+

-

歸原點設定

開始速度  尋找次數  1-10

最後速度

找馬達行程

開始找行程範圍

總行程

Open 電壓

到全關位置  Go 到全開位置

Function Key

CW    Go Home    CCW    Servo On    Servo OFF    Save to File    Initail    Exit Here

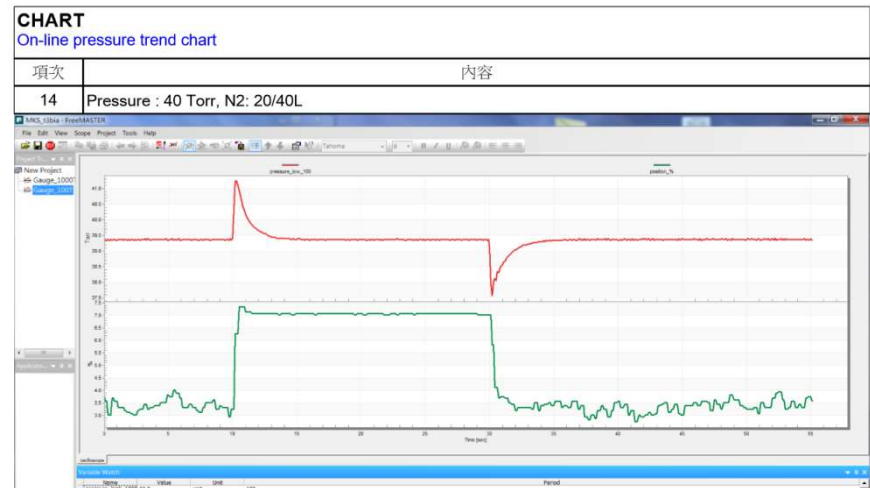
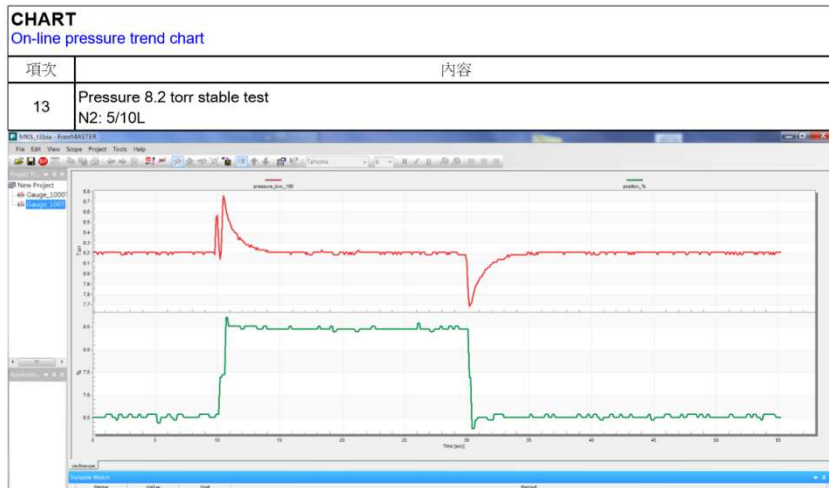
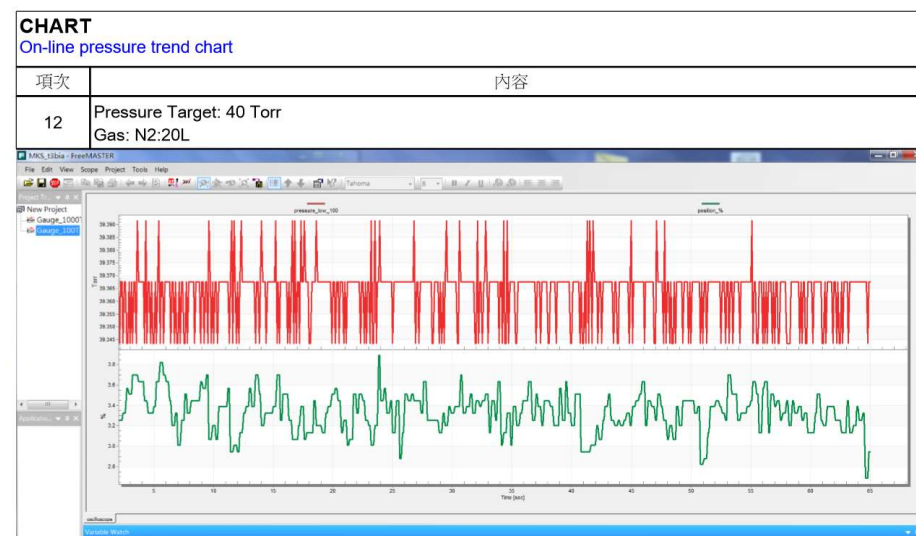
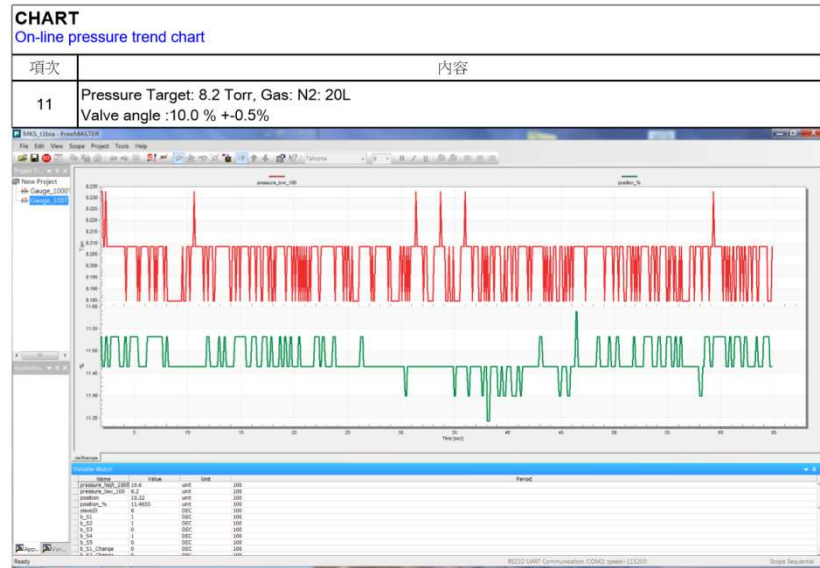
Motor performance check:

Within loading: 900 pulse /sec

Without loading: 1200 pulse/sec

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## ➤ O.Q.C (Out-going Quality Control)



# MKS T3BIA throttle valve overhaul project

## ➤ Material analysis report

O-ring

### Kalrez<sup>®</sup> 9100

#### Product Description

Kalrez<sup>®</sup> 9100 is an amber translucent product targeted specifically for etching and deposition process applications, e.g., HDPCVD, PECVD and ALD. It has also exhibited excellent performance in "select" ashing/stripping processes. Kalrez<sup>®</sup> 9100 has been specifically designed for low erosion and ultra-low particle generation in harsh plasma environments. It offers excellent thermal stability, very low outgassing as well as excellent elastic recovery and mechanical strength properties and is well suited for both static and dynamic sealing applications. A maximum continuous service temperature of 300°C is suggested. Ultrapure post-cleaning and packaging is standard for all Kalrez<sup>®</sup> 9100 parts.



#### Features/Benefits

- Low erosion rate and ultra-low particle generation in oxygen and fluorine-based plasmas
- Excellent resistance to dry process chemistry
- Excellent thermal stability
- Very low outgassing properties and metals content
- Excellent elastic recovery and low compression set properties

#### Suggested Applications

#### Typical Physical Properties<sup>1</sup>

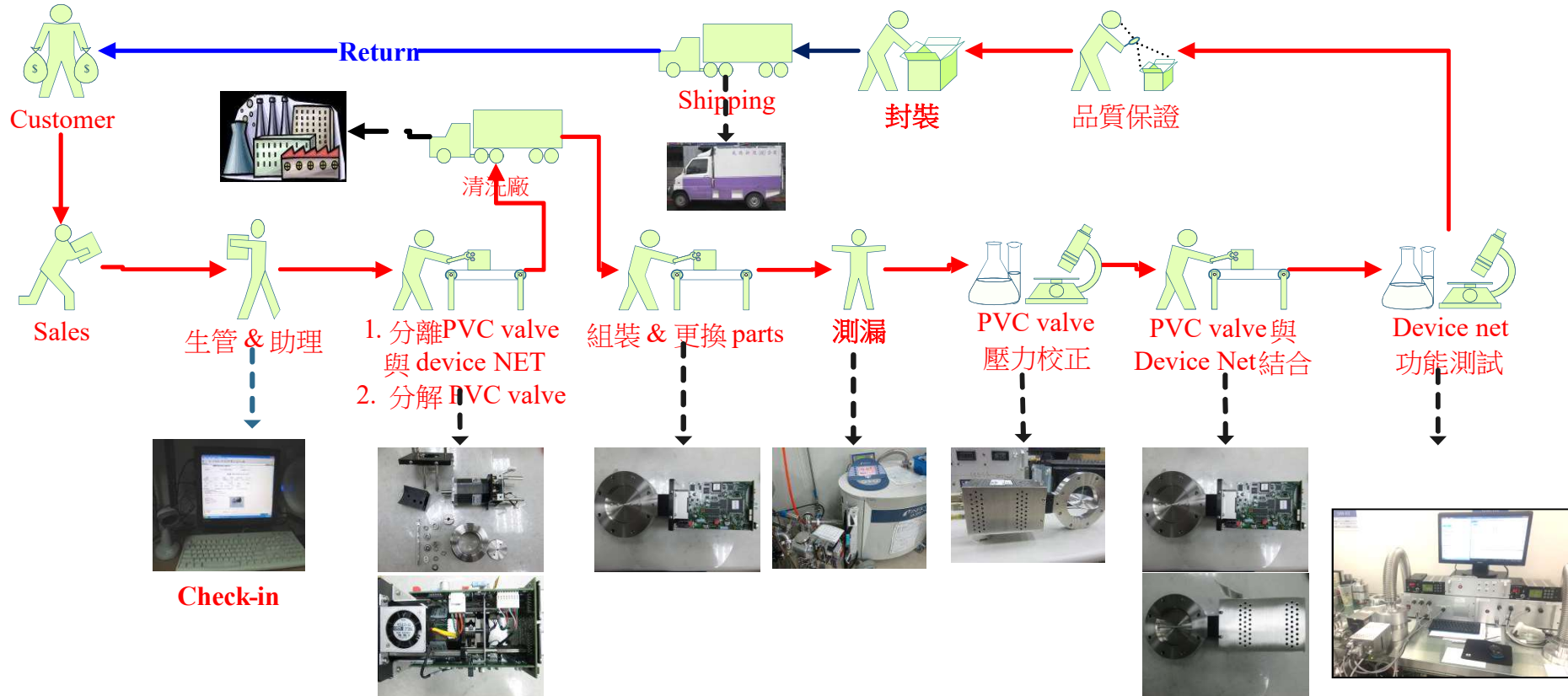
Property	Typical Value
Color	Amber Translucent
Hardness, Shore M <sup>2</sup>	74
100% Modulus <sup>3</sup> , MPa	4.27
Tensile Strength @ Break <sup>3</sup> , MPa	11.85
Elongation @ Break <sup>3</sup> , %	220
Compression Set <sup>4</sup> , %	
70 Hrs. @204°C	17
70 Hrs. @250°C	21
70 Hrs. @300°C	53

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## Parts repair procedure report

### 生產流程:

MKS PCV valve process flow:



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## ➤ Parts OEM/OPM Spec report

N/A

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## ➤ Parts clean procedure

Win-tt send the non-consumable parts to clean by outsourcing ( 科治,世禾).

