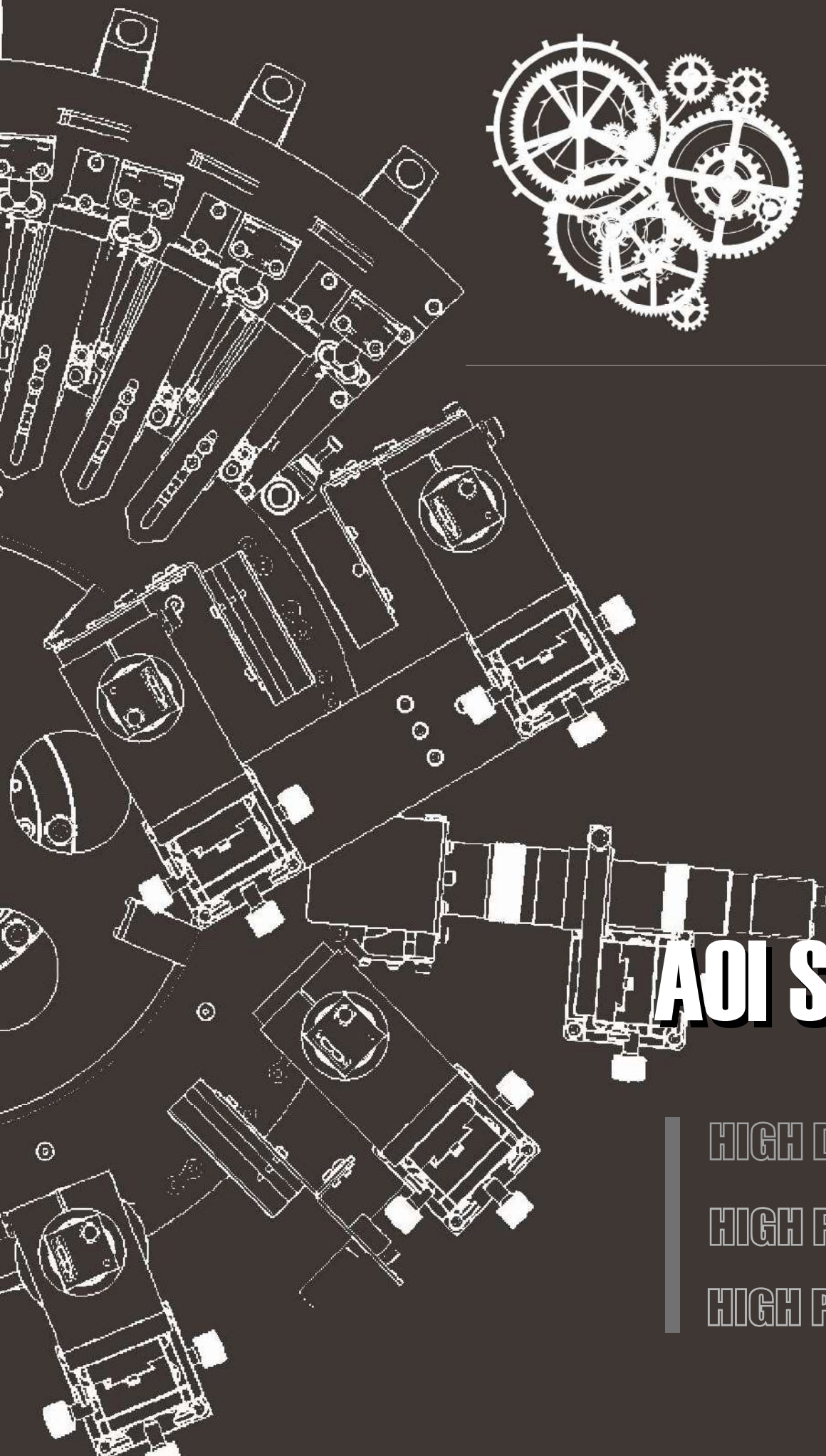


2020

# SORTING MACHINE



## AOI SOLUTION

HIGH DEFECTION

HIGH PERFORMANCE

HIGH PRECISION



# DING CHEN TEK

DCTEK.COM.TW

## - Optical Inspection Project -

### **I. Components : Spring**

- 車用彈簧片檢測

### **II. Plastic Injection**

- 塑膠射出檢測

### **III. Stamping Parts : Chain**

- 金屬鍊片檢測

### **IV. Computer Lock**

- 金屬圓環電腦鎖頭檢測

### **V. Passive Components : Inductor**

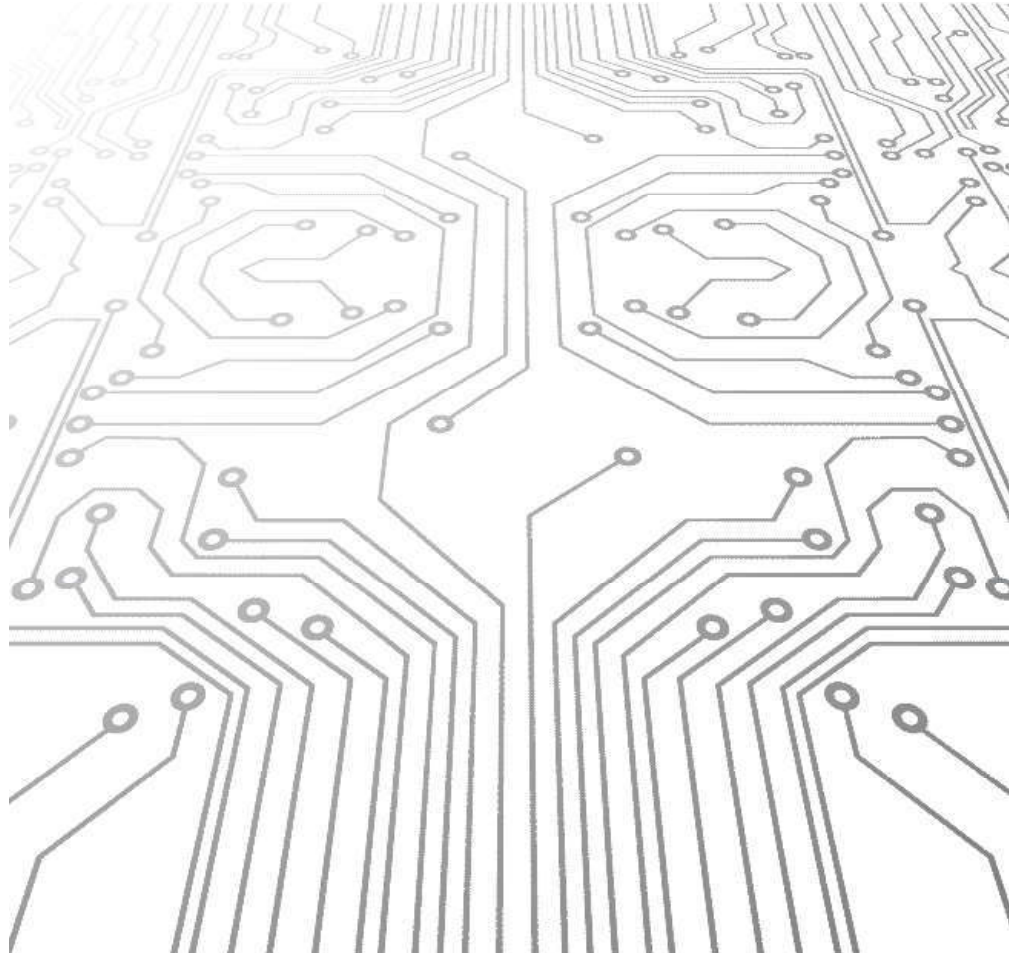
- 繞線電桿檢測

### **VI. Fastener : Screw**

- 螺絲螺帽檢測

### **VII. Instance**

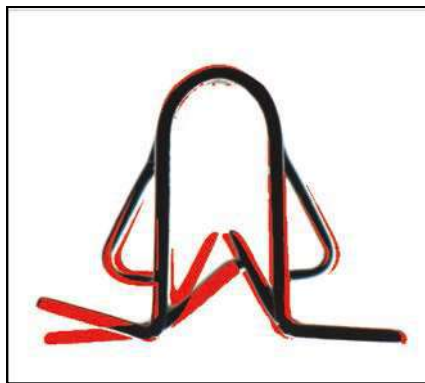
產品目錄



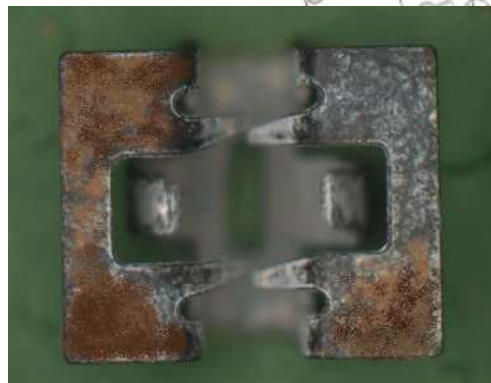
# Components : Spring

◇ 車用彈簧片檢測 ◇

變形檢測



生鏽檢測



## Defect Filter Specification

Defect Size(High / Width/Area)
Defect Gray Value
Defect Stander Number

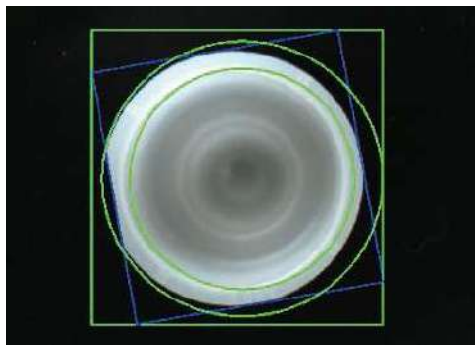
## Machine Specification

Power Input	AC 220V 50/60 Hz · 2 KVA
Air Input	0.5 MPa or higher
Image resolution	30 um/pixel
FOV	1 mm x 1 mm ~ 50 mm x 50 mm
Inspection Items	Pole size · User Defined Items
Productivity	100 ~ 300 unit/min
Sorting Bins	2 ~ 3 Bins
Dimensions	860 mm x 860 mm x 1965 mm (W x D x H)
Weight	450 kg
Camera	1 ~ 5 USB Camera · 1.3M
Computer	Win10 x64 Professional
UPS Protection	Yes

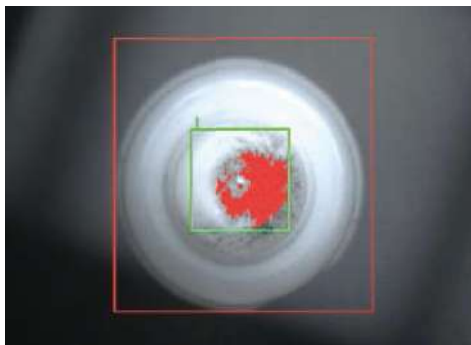
# Plastic Injection

◇ 塑膠射出檢測 ◇

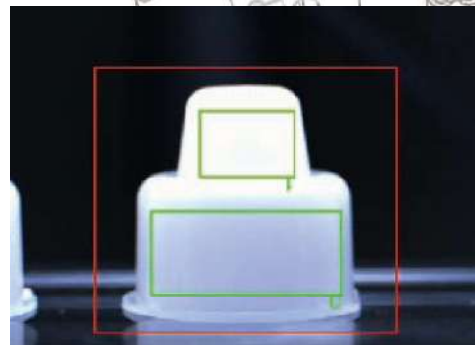
圓形定位



髒污檢測



側面檢測



## Defect Filter Specification

Defect Size(High / Width/Area)
Defect Gray Value
Defect Stander Number

## Machine Specification

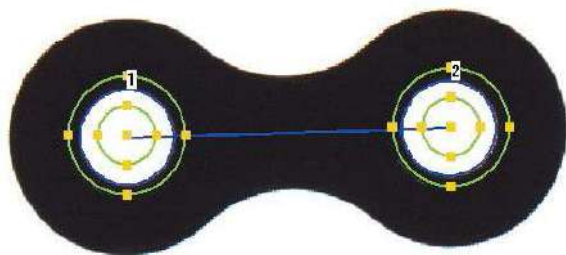
Power Input	AC 220V 50/60 Hz · 2 KVA
Air Input	0.4 MPa or higher
Image resolution	2.1 um/pixel ~ 13 um/pixel
FOV	1 mm x 1 mm ~ 50 mm x 50 mm
Inspection Items	Pole size · User Defined Items
Productivity	500 ~ 1000 unit/min
Sorting Bins	2 ~ 3 Bins
Dimensions	1060 mm x 1060 mm x 1965 mm (W x D x H)
Weight	450 kg
Camera	1 ~ 4 USB Camera · 1.3M
Computer	Win10 x64 Professional
UPS Protection	Yes



# Stamping Parts : Chain

◇ 沖壓件:鏈片 ◇

尺寸量測



LOGO識別



## Defect Filter Specification

Defect Size(High / Width/Area)
Logo Classification
Distance Measure

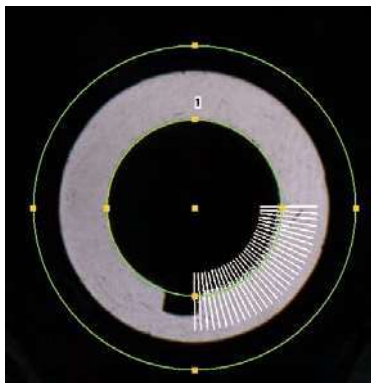
## Machine Specification

Power Input	AC 220V 50/60 Hz · 2 KVA
Air Input	0.5 MPa or higher
Image resolution	2.1 um/pixel ~ 13 um/pixel
FOV	1 mm x 1 mm ~ 50 mm x 50 mm
Inspection Items	Pole size · User Defined Items
Productivity	200 ~ 500 unit/min
Sorting Bins	2 ~ 3 Bins
Dimensions	1060 mm x 1060 mm x 1965 mm (W x D x H)
Weight	450 kg
Camera	1 ~ 4 USB Camera · 1.3M
Computer	Win10 x64 Professional
UPS Protection	Yes

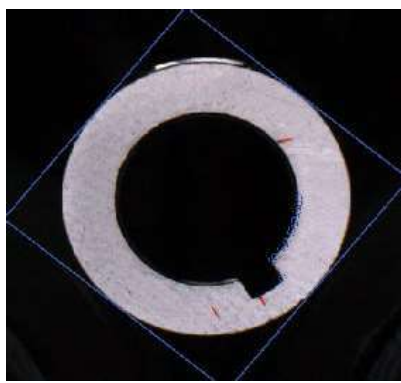


◇ 金屬電腦鎖殼檢測 ◇

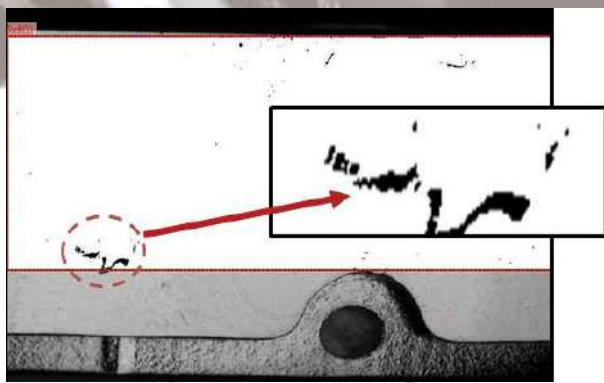
圓形定位



圓頂檢測



側面線掃檢測



Defect	Filter Specification
	Defect Size(High / Width/Area)
	Defect Gray Value
	Defect Stander Number

Machine Specification	
Power Input	AC 220V 50/60 Hz · 1 KVA
Air Input	0.4 MPa or higher
Image resolution	2.1 um/pixel ~ 13 um/pixel
FOV	1 mm x 1 mm ~ 50 mm x 50 mm
Inspection Items	Pole size · User Defined Items
Productivity	7 ~ 10 unit/min
Sorting Bins	2 Bins
Dimensions	500 mm x 500mm x 1500 mm (W x D x H)
Weight	150 kg
Camera	2 USB Camera · 1.3M
Computer	Win10 x64 Professional
UPS Protection	Yes



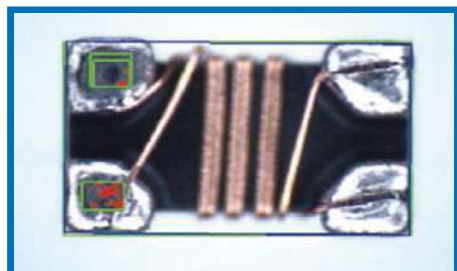
# Passive Components

◇ 繞線電感檢測機 ◇

掛線不良

熔接不良

翻錫



## Defect Filter Specification

Defect Size(High / Width/Area)
Defect Gray Value
Defect Stander Number

## Machine Specification

Power Input	AC 220V 50/60 Hz · 3 KVA
Air Input	0.4 MPa or higher
Image resolution	2.1 um/pixel ~ 13 um/pixel
FOV	1 mm x 1 mm ~ 17 mm x 17 mm
Inspection Items	Pole size · User Defined Items
Productivity	2000 ~ 4000 unit/min
Sorting Bins	2 ~ 4 Bins
Dimensions	1060 mm x 1060 mm x 1965 mm (W x D x H)
Weight	450 kg
Camera	1 ~ 8 USB Camera · 1.3M
Computer	Win10 x64 Professional
UPS Protection	Yes



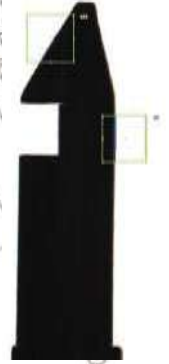
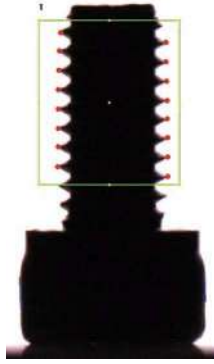
頭部寬度

牙距量測

螺絲長度

頭部高度

角度量測



### Defect Filter Specification

Defect Size(High / Width/Area)

Defect Gray Value

Defect Stander Number

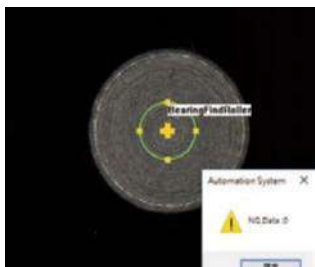
### Machine Specification

Power Input	AC 220V 50/60 Hz · 3 KVA
Air Input	0.5 MPa or higher
Image resolution	30 um/pixel
FOV	1 mm x 1 mm ~ 50 mm x 50 mm
Inspection Items	Pole size · User Defined Items
Productivity	300 ~ 600 unit/min
Sorting Bins	2 ~ 3 Bins
Dimensions	1060 mm x 1060 mm x 1965 mm (W x D x H)
Weight	450 kg
Camera	1 ~ 6 USB Camera · 1.3M
Computer	Win10 x64 Professional
UPS Protection	Yes



## 電子零件滾珠偵測

背部影像



正面缺珠



正面有珠1



正面有珠2



## 牙傷檢測

外360度影像



螺牙瑕疵檢出



## 內螺牙偏孔檢測

正常影像



斜牙

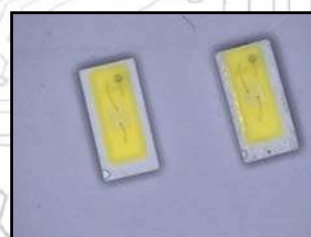


斜牙影像極座標轉換檢測

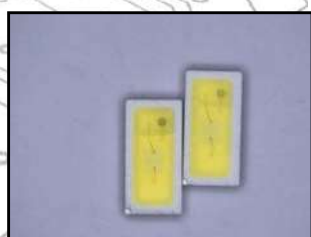


## LED表面檢測

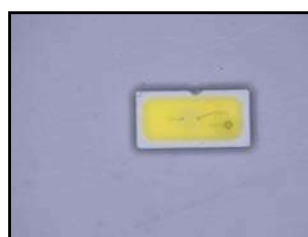
切偏



板裂



板破

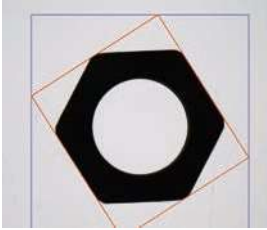


半黑杯



## 扣件檢測

對邊量測



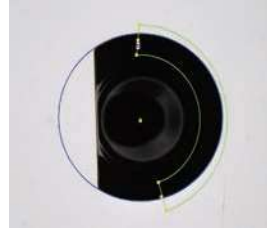
倒角直徑



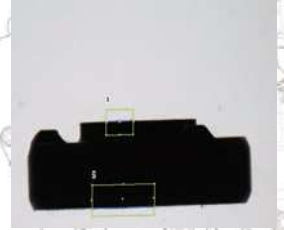
內牙有無



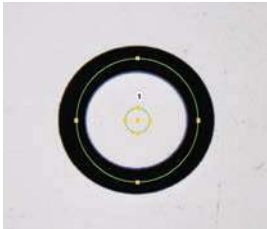
圓弧量測



高度寬度量測



真圓度



瑕疵塞孔檢測



表面崩缺



同心圓量測



印記偵測

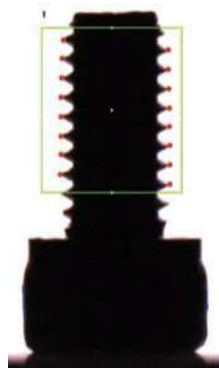


## 螺絲檢測

頭部寬度



牙距量測



螺絲長度



頭部高度

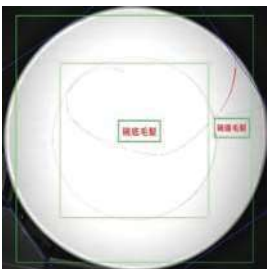


角度量測

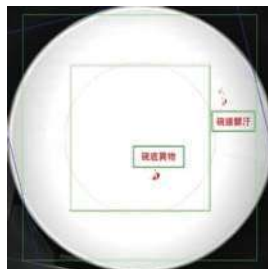


## 紙碗髒污檢測

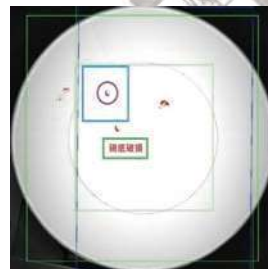
毛髮入塵



異物瑕疵



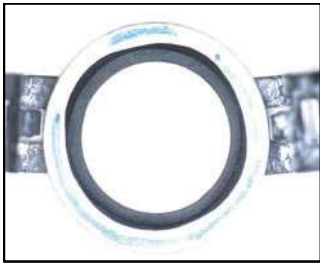
破洞瑕疵





## 油封檢測

填充不足



檢出結果



表面髒污



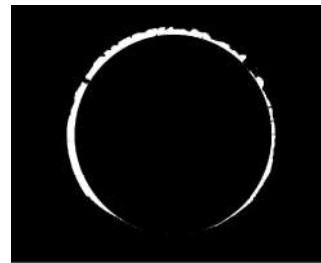
檢出結果



產品溢膠



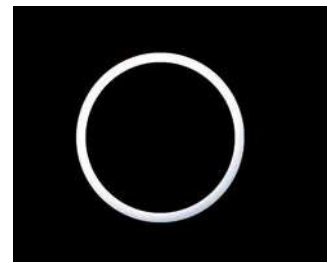
檢出結果



內環缺膠



檢出結果



## 橡膠表面檢測

破損瑕疵1



檢出結果



破損瑕疵2



檢出結果



破損瑕疵3



檢出結果



破損瑕疵4

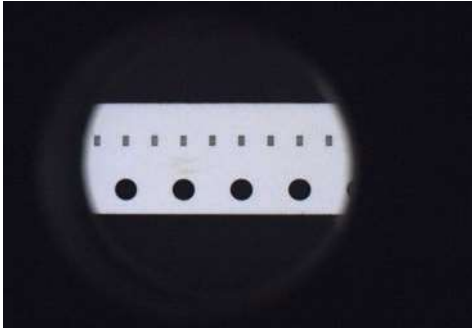


檢出結果

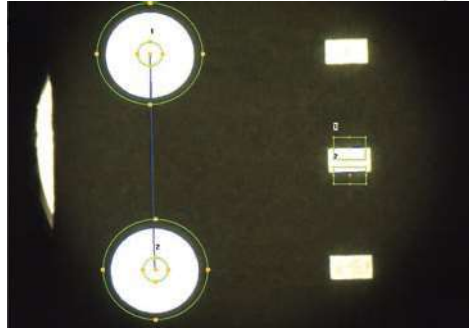


## 料帶條檢測

料帶條外觀

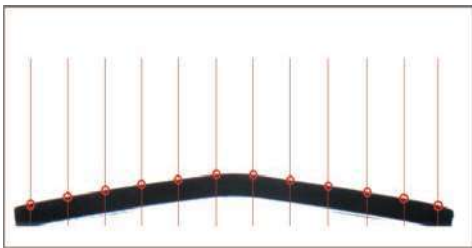


料帶孔徑與間格量測



## 鏈片檢測

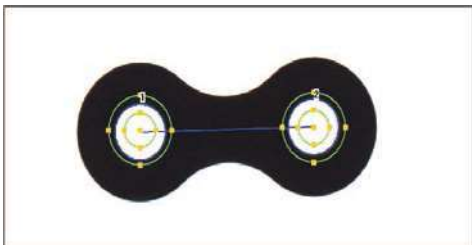
翹曲量測



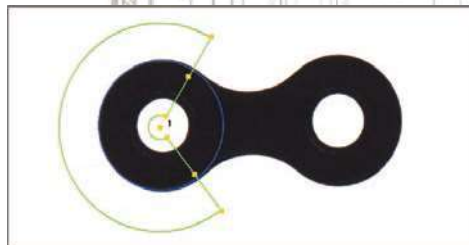
Logo識別



圓孔間距量測

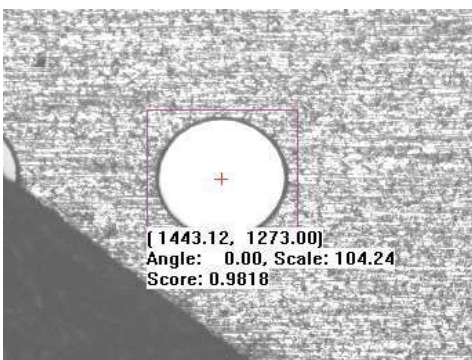


圓弧量測

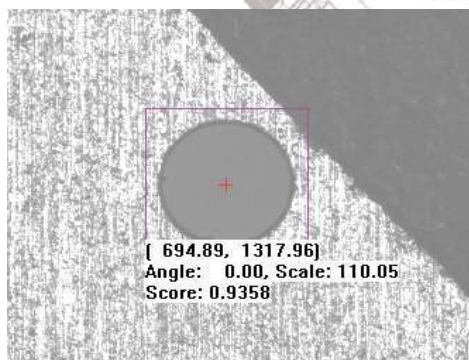


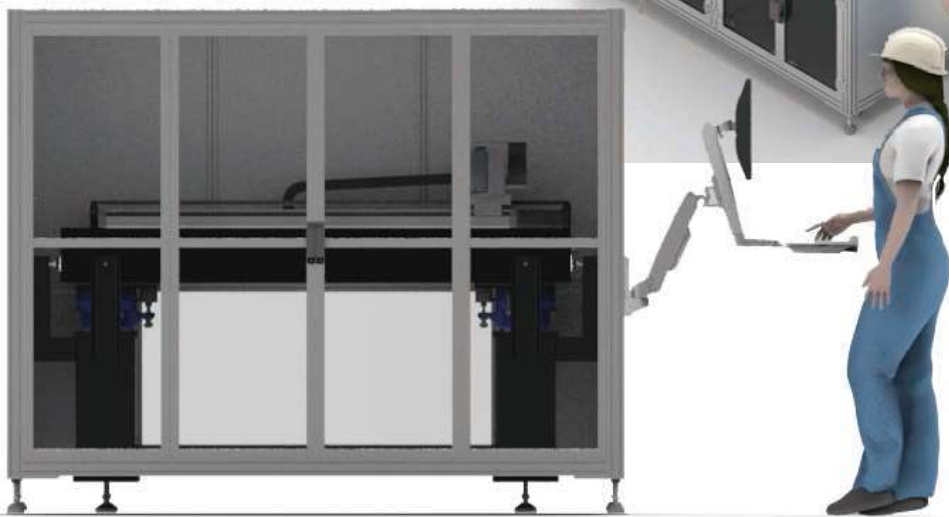
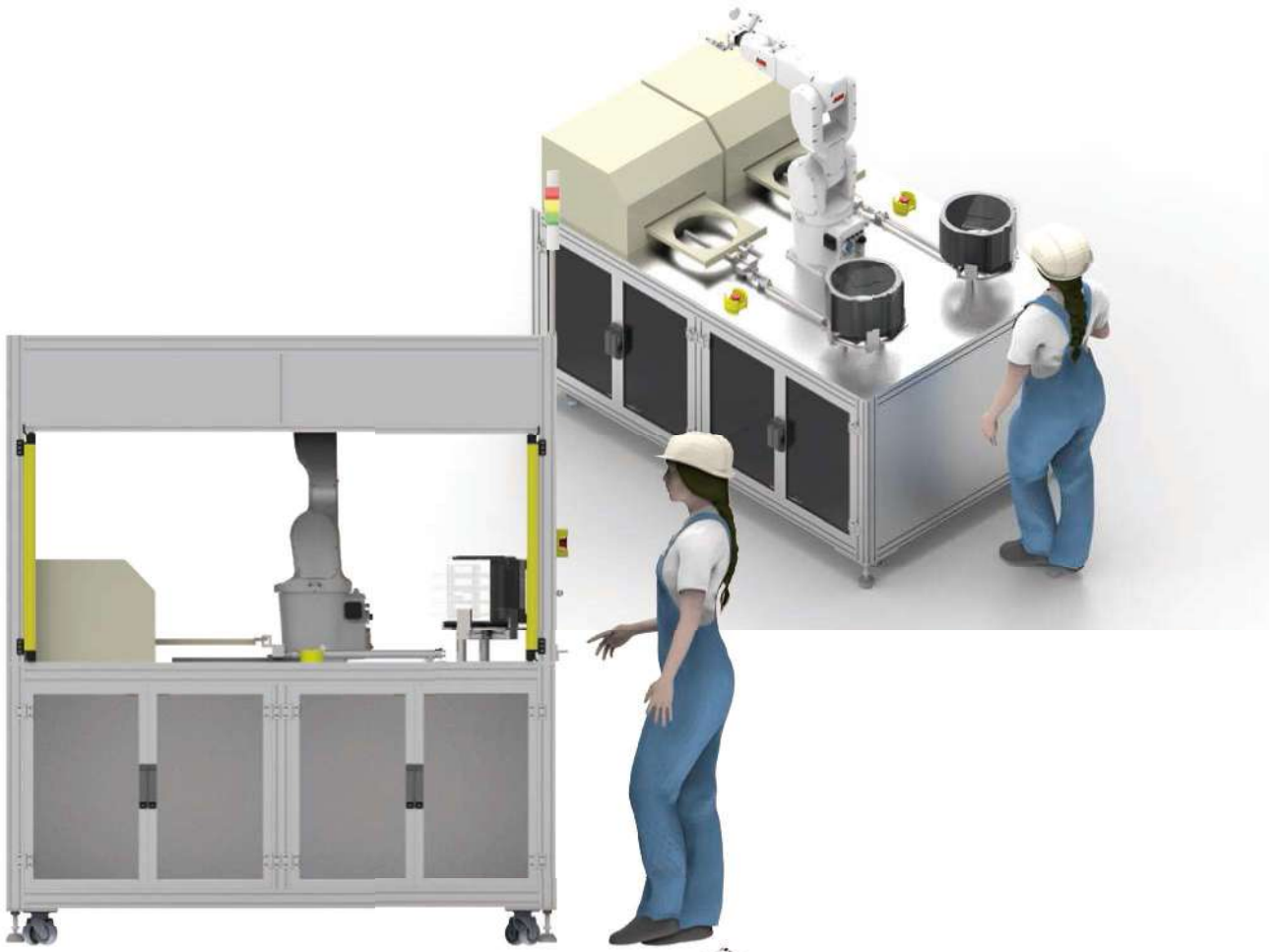
## 雙視覺影像對位

輪廓定位(白)



輪廓定位(黑)





2020

# SORTING MACHINE



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