

iMF 4.0 智慧成型解決方案

intelligent ManuFactory Smart Injection Molding Solution

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智慧塑機 Smart Machine

運用外加感測器，掌握因環境、塑料、設備磨耗的微量變異，提升射出機自適應調控能力。
Applying additional sensors to monitor and meet the slight fluctuations caused by the environment, material, or machine abrasion, and to improve the adaptive control of injection molding machines.

- 大柱鎖模力監視系統
Tie bar clamping force monitoring system
- 智慧化流動平衡系統
Intelligent flow balance system
- 熔體黏度變異自適應
Adaptive control for viscosity variation of melt
- 模具冷卻流量與溫度監視
Mold cooling flow and temperature monitoring system

智慧周邊 Smart Auxiliary

透過標準通訊協定，達到設備運轉、互聯及調控之目的。

The IMM and auxiliaries could operate, communicate with each other through the standard communication protocol, to be adjusted and controlled.

- 機械手 Robot System
- 供料機 Material Feeding
- 模溫機 Heaters
- 冷凍機 Chillers
- 熱澆道 Hot Runner

iMF 4.0 智慧製造工廠 Intelligent ManuFactory 智慧管理 Smart Management

透過智慧管理系統收集關鍵熔體變異數據。
Using intelligent managing system to collect the key data of viscosity variation of melt.

- 尋找生產進度瓶頸
Find the bottleneck of a better production
- 檢測品質偏移因素
Detect the deviation factors of molding quality
- 擬定預警維護，減少意外停機
Plan the preventive maintenance and reduce unexpected downtime.

智慧製造 Smart Manufacturing

- 判別良窳 Distinguish good or bad
- 增進效率 Improve rate of production
- 促進良率 Improve Effectiveness

由熔體變異或模穴壓力感測，即時線上監控品質，並搭配機械手臂檢出不良品，有效降低品檢人力。
Real-time online quality monitoring through the sensors of viscosity variation of melt, or cavity pressure, and detecting the defectives with automations, to effectively reduce the inspection manpower.

穩定可預測
的生產模式
Stable and
predictable
production

系統架構 System Structure



- ✓ 廠區機台遠端監控。
Remote monitoring of the machine in the plant.
- ✓ 工單訊息電子化派送。
The work order message is electronically delivered.
- ✓ 生產狀況實時顯現，立即分析生產趨勢。
Production status appears in real time, analyze production trends immediately.
- ✓ 生產訊息自動報表化，利於決策者分析。
Automatic reporting of production information is beneficial to decision makers.
- ✓ 周邊感測器聯機，智慧化控制。
Peripheral sensors are connected online and intelligently controlled.
- ✓ 完整機台、模具、原料、產品數據庫。
Complete machine, mold, raw materials, product database.
- ✓ 建置生產履歷，產品數據可回溯。
The production history is built and the product data can be traced back.

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