MindSphere Partner Use Case

Plastic Injection Molding Integration

Real-time production and performance monitoring for connected machines

Summary
There are over 1 million plastic injection molding machines deployed worldwide in production environments. These machines are frequently deployed to cover a specific purpose and often are not well integrated into larger production automation and digital transformation initiatives.

A common challenge for injection molding environments is avoiding quality issues that reduce the usable yield in each batch. Connected business data regarding inputs and operating performance data are needed to truly address this issue.

At the same time, moving to a predictive maintenance posture provides great dividends to companies in the form of improved uptime. Holistic visibility to production and performance data is necessary to enable these results.

Improve production quality and productivity for Plastic Injection Molding Machines

This solution use case is driven by znt-Richter’s Process Automation Controller (PAC) and the MindSphere platform. It is a powerful open platform for the implementation of equipment integration and automation solutions, providing the connection between production equipment, the MES level application, and the MindSphere Cloud.

This flexible platform is designed for injection molding machines that have been deployed within the last 20 years and allows a true digital transformation to IoT and Industry 4.0 interfaces (EUROMAP Standard).

MindSphere based business applications are drawing real-time machine data and cross-referencing with production data to provide true visibility to machine performance (OEE), quality outcomes and improvement, and machine health data to enable predictive maintenance and improved uptime in your facility.

Benefits
• Clear visibility to performance and production data of connected machines.
• Adjust quality parameters to improve production yield.
• Improve Overall Equipment Effectiveness (OEE).
• Enable predictive maintenance based on machine health data.

Features
• Integration of connected machine data with MES platform and MindSphere.
• Real-time manufacturing and machine data collection and analysis.
• Real-time inventory of raw material.
• TPM data access to enable predictive maintenance.

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MindSphere is the cloud-based, open IoT operating system from Siemens that connects real things to the digital world, and enables powerful industry applications and digital services to drive business success. MindSphere’s open Platform as a Service (PaaS) enables a rich partner ecosystem to develop and deliver new applications.