

Automation & CONTROL SYSTEMS

AMONG OTHER NOTABLE BENEFITS FROM THE IMPLEMENTATION OF THE FACTORY DATALOGGING SYSTEM ARE:

IDENTIFICATION OF EQUIPMENT LOSSES

- Classification of rejects
- Classification of downtime
- Breakdown of equipment OEE by downtime, quality and speed

AUTOMATING PRODUCTION REPORTING

- Production status, number of rejects, quality levels, machines utilized and so on.

INTEGRATED MAINTENANCE MANAGEMENT SYSTEM

- Work Order generation and management
- Preventive Maintenance (PM) scheduling, PM procedures and tasks, etc
- Predictive Maintenance and Condition Monitoring
- Equipment history, maintenance costs by equipment and asset register to track asset utilization

INTEGRATED DOCUMENTATION MODULE

- Provides on-line
 - * Schematics
 - * Trouble-shooting guide
 - * Equipment datasheets and specifications
 - * Equipment drawing
- The Intergrated Maintenance Management System and the Document Module enhances Mahkota's Factory Datalogging System capabilities to reduce equipment related losses and improve the Overall Equipment Effectivity.

Factory Datalogging System

The **Factory Datalogging System** is a comprehensive real-time intelligent data-logging system utilizing the Mahkota Controller, MC-88. This enables any factory or manufacturing plant to automate the data collection process into a seamless, paperless system, and provide valuable productive information.

The Datalogging System running on the QNX real-time operating system, comprises a number of distributed MC-88 controllers, each with the capability to interface directly to existing equipment or to input data via keyboard or barcode scanners, RFID reader, data terminals, etc.

This system performs the entire data collection process, and provides the customer with real-time information on Overall Equipment Effectivity, Production Equipment Status, Plant Process and Production Status. The system supports the logging, tracking and archiving of product/batch information (part numbers, date code, etc) of the raw materials and components that make up a product assembly.

In high-speed production lines, early detection of failures is critical to reduce rejects and scrap. The Factory Datalogging System interfaces with the in-line test and inspection equipment. Any abnormality will be flagged so that plant personnel can take swift action to stop the line and fix the problems. "Smart" features breakdown analysis, fault-finding diagnostics, trouble-shooting guides will assist plant personnel in diagnosing and identifying the causes of such failures. Such features are especially useful in complex production lines involving multiple equipment; batch production processes in helping to identify the particular equipment that the product came from, and in training new technical personnel.

The Factory Datalogging System will provide suitable real-time metrics to help production personnel embarking on implementing Total Productive Maintenance programs or Continuous Improvement programs.

