Baxter Finds Extra Production Capacity; Increases OEE with ABB Solution*

An ABB production monitoring system has helped the plastic pouch department at the Baxter Healthcare Corporation factory in Lessines, Belgium increase its Overall Equipment Efficiency (OEE) from 71.5 to 81.6 percent.

Client:	**Baxter Healthcare Corporation**
Location:	**Lessines, Belgium**
Scope of Work:	**ABB's Optimize^IT Real-Time Production Intelligence (Real-TPI)**

A project undertaken to improve a production bottleneck led to a reduction in downtime of approximately 3%. Another project to reduce downtime on a scrap removing machine led to a further reduction of approximately 2.5%.

ABB's Optimize^IT Real-Time Production Intelligence (Real-TPI) has helped the plastic pouch department at the Baxter Healthcare Corporation factory to achieve an increase in its Overall Equipment Efficiency (OEE), from 71.5 to 81.6%.

The Background

The Baxter facility in Lessines, Belgium, makes products for hospitals and home patients and exports over 85 percent of its production. One of the key divisions is the Medication Delivery business. This business produces plastic drug delivery devices. With the Kiefel department, they produce 240 million pouches a year.

The Solution

Baxter began its improvement program in the Kiefel department in 1997, using Excel spreadsheets to calculate OEE. This method's inflexibility led Baxter to adopt a dedicated OEE tool, a package that is developed and distributed by ABB as Optimize IT Real-Time Production Intelligence (Real-TPI).

Real-TPI analyzes and reports OEE in real time, giving production managers a better understanding of shortcomings on the production line and allowing them to take action to increase productivity. The system allows Baxter managers to look at any time period, such as the previous night shift, to see possible problems. It does this by collecting and analyzing production data to identify ways to increase efficiency.

ABB

Real-TPI makes it easy for Baxter to track daily progress, identify and react to possible problems in the production lines.

By recording machine events and breakdowns online, Real-TPI can provide quick, clear analysis and show the trend of the breakdowns for each asset monitored by the software. Several improvement methods can then be applied, based on the data collected. Some options are: PM analysis, Root Cause Analysis (RCA) or Failure Mode, Effect and Criticality Analysis (FMECA).

The results of the analyses are presented in a variety of reports using techniques such as Pareto Charts, Waterfall Diagrams, Penalty Charts and Production Reports. Data provided by Real-TPI allows machine and cycle times to be reduced, leading to increased throughout.

Results

The first project undertaken was to improve a production bottleneck on the Kiefel machines, the port inserter, which places a cap on the end of the tube sealed to the plastic pouch. Based on data provided by Real-TPI, FMECA showed that a redesign of the cap distribution was necessary.

A number of actions were implemented during this project, including modification of the vacuum system and of the cap distribution pipes and ramps. The project led to a reduction in downtime on the 12 Kiefel machines by around 3%, from +/-23% downtime to +/- 20% downtime.

Other projects include work on a scrap removing machine, which removes the extra material around the pouches before the quality check and packaging. This project led to a further reduction in downtime of around 2.5%.

As well as supplying the Real-TPI software, ABB helped Baxter develop and implement a new OEE model based on the French standards. The flexibility of Real-TPI allows a seamless integration to Baxter's Computerized Maintenance Management System (CMMS).

Why Choose ABB?

- Reducing Bottlenecks
- Increasing Uptime
- Achieving Measurable Results
- Turning Data into Actionable Knowledge
- Optimizing Plant Asset Availability and Performance

"While information from the controls and maintenance systems is important, information needs to fit into a broader context," says Bert Mijten, Product Manager, Real Time Production Intelligence, ABB Inc.

"Measuring in real-time and combining it with analysis techniques provides an opening to the hidden plant and hidden capacity. Our real-time production intelligence systems monitor controls and equipment, looking for losses in manufacturing production operations, loading, scheduling, supplies, quality and equipment availability."

Currently, average OEE in the manufacturing sector is around 60% – the goal of Baxter Lessines is to become a World Class Manufacturing facility with an OEE of 85% and, with Real- TPI, ABB has helped put the company's Kiefel department on course.

For more information on how ABB's Optimize IT Real-Time Production Intelligence can be employed to solve your process control issues, visit us at www.abb.com/controlsystems.

For more information on how ABB's Industrial IT technology can be employed to solve your consumer product manufacturing issues, visit us at www.abb.com/consumer.