



## Epicor Success Story

# Chrysler

## Epicor Mattec MES provides real-time production data essential to decision-making at Chrysler

### Company Facts

- ▶ Location: Etobicoke, Ontario, Canada
- ▶ Industry: Supplier of Automotive Pistons, Brackets and Housings
- ▶ Web site: [www.chrysler.com](http://www.chrysler.com)

### Success Highlights

#### Challenges

- ▶ 62-machine manufacturing environment
- ▶ Analyze production, scrap, downtime issues on a shift-by-shift basis
- ▶ Analyze long-term production performance trends by machine
- ▶ Real-time resource-level visibility at every level of the organization
- ▶ Track effective die life

#### Solution

- ▶ Mattec MES, Epicor manufacturing execution and real-time production monitoring system

#### Benefits

- ▶ Real-time information enables immediate remedial action when necessary
- ▶ Improvements in uptime, cycle time, scrap, etc. result in 30% reduction in costs
- ▶ Improved die-life tracking maximizes asset value and eliminates unscheduled downtime due to die failure
- ▶ Provides historical information for trend analyses



### Chrysler Benefits from Epicor

Information doesn't make decisions; it's the raw material of decisions. The more applicable and timely it is, the better your decisions will be.

For over 15 years, managers in virtually every department throughout Chrysler's Etobicoke, Ontario die casting facility have based their decisions on the real-time data collected by the Epicor production monitoring system, Mattec MES.

The plant is an aluminum die-casting facility, producing automobile engine components, such as housings, pistons and connecting rods for Chrysler, Mercedes and AMG.

Sam Mahon, the plant's production control manager, is principally responsible for logistics, scheduling and productivity for this manufacturing environment consisting of 62 machines, from high and low-pressure die cast machines to heat-treat furnaces and machining centers. "Mattec MES is the be-all-and-end-all in terms of the information we use for decision-making," he says. "The software monitors all production operations and provides the data for virtually all our reports, informing our judgments about where to send resources to fix problems."



## Identifying Trends

Mahon and his staff typically utilize the Mattec MES-produced reports in twice-daily production meetings, where they scrutinize production, scrap, cast-to-ship ratios and downtime issues. Using this information allows them to prioritize maintenance activities or adjust production schedules and machine allocation on a shift-by-shift basis. Due to the data's real-time nature, managers can retrieve updated metrics—sorted by part, resource, shift or any defined parameter—at any point throughout the day.

"From a scheduling perspective, every hour, every shift, every day Mattec MES tracks the quantity of a given part we actually made vs. what we planned, so we're reacting to the real-time data we're getting," says Mahon.

Leveraging the information collected by Mattec MES, Mahon also analyzes trends over a longer-term. In a weekly "Throughput Meeting" Mahon's group focuses on trends in critical areas like overall uptime and scrap rates. "If we were having issues with high scrap on a particular machine and we took some corrective action we'll look at it week-to-week to see if we're getting the results we want."

The group's analysis extends to historical quality and productivity comparisons as well. Some production processes at the plant are weather-related. For instance, hot, humid conditions may raise the metal's moisture content, impacting quality. After instituting corrective actions, Mahon uses Mattec MES reports to compare the current year's quality data to previous years' under similar conditions.

"Mattec MES provides us with real data to work with so that we can make improvements," says Mahon, who points out that access to the historical data enables the early diagnosis of potentially damaging trends, allowing his group to respond preventatively. "People always talk about machines that aren't running well; not the ones that are. If I have a machine running at 110%, most would say that isn't a problem, but if it was running at 115% last week that represents a downward trend, so it is a problem. Without a tool like Mattec MES, you're only looking at problems after they present themselves."

## Improved Uptime, Cycle Times and Scrap

Identifying an early-stage issue or predicting when a problem could arise allows Mahon to take steps to mitigate any possible negative impact on his primary areas of responsibility: uptime and scrap. In fact, over the past three years, Chrysler has realized a 30-percent reduction in costs due to improved uptime and cycle times and reduced scrap—savings Mahon directly attributes to quality of the data collected by Mattec MES.

At this Chrysler plant, one crucial element of both uptime and scrap is the condition of each die. Mattec MES tracks the number of cycles on a particular die, as well as its scrap rate and downtime, enabling production control personnel to predict the end of that die's effective life and order a new die accordingly. The replacement cost may reach hundreds of thousands of dollars and require a six-month lead-time, so the integrity and timeliness of the data collected by Mattec MES is critical to optimizing each die's productive life and avoiding unscheduled downtime due to die failure.

## Real-Time Resource-Level Visibility Enables Rapid Issue Identification and Effective Response

More than 20 screens throughout the plant display Mattec MES real-time production-related data for virtually every machine and every tool and every die, showing cycle counts and visually alerting production staff when a mold or die change is needed or when a particular metric, like scrap, falls out of standard.

"I don't have to wait until the end of the shift to analyze scrap," says Mahon. "I can look at the data from my desktop and call the supervisor to find out why the scrap is so high for die-cast #14, for instance."

That same real-time data visibility is available to personnel at all levels of the organization. For instance, an operator can immediately alert a supervisor or the plant maintenance staff to an issue by entering a predefined help-code on the Machine Interface Unit (MIU). "The operator and supervisor are looking at the same data I am, so hopefully they've already diagnosed an issue and taken some action before I get involved," says Mahon.

Mattec MES is now so deeply integrated into Chrysler's operations that Mahon credits it with playing the role of the plant's Factory Information System.

And though Mahon has difficulty envisioning life without Mattec MES, he believes Chrysler would still try to collect the same data Mattec MES does, though the cost in terms of time, resource productivity and the information's value as a decision-making resource would be greatly compromised.

"It's hard to overstate how vital the system is. It doesn't solve our problems for us, but you have to know you have a problem before you can solve it. Mattec MES helps us focus our decisions and resources. That's absolutely key."



## About Epicor

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