

ATEK Plastics Reduces Scrap and Improves Quality Performance with Systematic/Decoupled Molding Process

Program provides on-time delivery of more than 144 million defect-free products per year

KERVILLE, TEXAS (July 8, 2008) Through the implementation of a Systematic/Decoupled MoldingSM program, [ATEK Plastics](#), a division of [ATEK Companies](#), has dramatically reduced scrap, shortened start-up time and time to market, and improved quality performance of injection molding operations at its Kerrville, Texas plant.

Through the use of this new program, ATEK Plastics is helping to ensure it remains competitively priced in an otherwise volatile marketplace. Specifically, the technique has enabled the company to supply more than 144 million defect-free products per year while maintaining 100 percent on-time delivery since the program was implemented in 2005.

Incorporating the Systematic/Decoupled Molding approach into ATEK's DNA has raised the bar for what we expect from ourselves and what our clients should expect from suppliers, said Thomas Houdeshell, president of ATEK Plastics. Without the program, we wouldn't be able to sustain the level of quality production that we pride ourselves on delivering day in and day out.

A standardized approach to developing, optimizing, and trouble-shooting robust injection molding production processes, a Systematic/Decoupled Molding program works on the principle that the more stable the process, the fewer defective parts are produced. Developed by RJG, Inc., the program focuses on optimizing the injection molding process by using process data (such as temperature, flow rate, pressure, cooling rate and time) to identify and correct viscosity variations that are the root-cause of product defects.

A leader in the application of process improvement techniques, ATEK Plastics began embracing the use of Systematic/Decoupled Molding techniques on the production line in 2004 and has since incorporated the philosophy across all departments to unify processing, tooling, and maintenance. A key element of the program is the integration of data collection and analysis using a company-wide real-time ERP system.

Its one thing for monitoring equipment to communicate a higher than normal scrap rate or a below standard condition. This method leaves the issue open for finger pointing and delay of root-cause analysis, said Houdeshell. However, using the systematic approach, team members are not only aware of the issue, but since everyone is speaking the same language, the root-cause analysis and resolution is expedited.

For example, team members can use cavity balance, gate seal analysis and pressure loss studies to determine if the root-cause of defect is a mold issue. For a material issue, ATEK processors run a relative viscosity curve, 30/30 melt temp, and gate seal analysis. For a machine issue an analysis on the check ring repeatability, pressure response, and injection speed linearity can be run. This combination of steps enables ATEK Plastics to quickly pinpoint and solve a problem reducing lost product and downtime.

In addition to managing the production process, Houdeshell and his colleagues found that the human side of problem solving can present equal challenges.

Arguably, the most critical step in the adoption of the Systematic/Decoupled Molding process was the education and training of our employees a process that is ongoing, said Houdeshell. Bottom line, whether the problem is the mold, the machine or the technician, it's critical that all departments understand and are trained in these techniques. Ultimately, getting it done depends on communication. These techniques allow the ATEK team to communicate effectively among all departments to achieve the common goal of customer satisfaction.

To support ongoing education, ATEK Plastics has an in-house RJG instructor for Systematic Molding I and Master Molder I for process technicians.

About ATEK Plastics

ATEK Plastics is the preferred manufacturing partner providing full-service precision injection molding solutions to the medical, automotive, industrial, and commercial markets. Their success is built on customer relationships, working with engineering and manufacturing experts to develop quality products that make companies successful. ATEK Plastics is part of the privately held and family-owned ATEK Companies, based in Minneapolis. For more information about ATEK Plastics, please visit

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About ATEK Companies

ATEK Companies is the preferred manufacturing partner serving diverse industries including medical, aerospace, defense, communications, and transportation. ATEK Companies distinguishes itself from the competition through its 60-year history of delivering unparalleled value, high quality products, and creative solutions. ATEK Companies offers total project management, including electrical and mechanical product design and launch, supply chain management, production, packaging and distribution, and post-production fulfillment services. ATEK Companies is comprised of five businesses, which include ATEK Medical, ATEK Manufacturing, ATEK Plastics, ATEK Products, and Progress Casting. For more information visit www.atekcompanies.com