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## Success takes more than a strong molecule

From production in Kelsterbach to the point where a car maker in Detroit installs the actual part, Ticona has to keep an eye on product costs, costs for the whole system – a pump, for instance – and provide product development service for customers. It is exactly this combination of product quality, supplier reliability, technical service and ability to innovate that makes Ticona successful.

Joachim Gersdorf arrives in a red helmet and red station wagon to discuss the construction plans for expanding the polymerization unit. In the container building next to the construction site, he briefly describes his responsibilities: “I’m also serving as emergency manager today and tomorrow. That means I’ll be at the plant for 24 hours, assuming responsibility for proper assessment and handling of operational failures.” Joachim Gersdorf’s main job, however, is head of operations for polyacetal (POM) production in Kelsterbach. In spite of all his enthusiasm for production technology and expansion efforts, he is quick to turn his attention to the most important success factors for the business:

“Cost and performance are top priorities. With process improvements and efficient process control systems we are able to further reduce production costs and guarantee premium quality and supplier reliability. At the same time, we advise our customers on the functionality of our high performance polymers, enabling them to have simpler, cost-effective processing, as well as new applications or better products.”

### Securing market share through capacity expansion

The business is also expanding capacity of the POM plant in Kelsterbach, in two phases, from 77,000 to 100,000 met-

ric tons per year. A third planned phase should result in a capacity of 130,000 metric tons. Six Sigma was employed during planning and construction preparation phases for the two capacity expansions to identify potential areas for optimization and cost reduction, so that the investment costs could be lowered even more – a contribution to cost leadership.

By building a third production line, Ticona can produce an even greater variety of standard and specialty products. Large volumes of standard Hostaform® product are produced in one area of the plant, while the third line will be reserved for high-quality Hostaform® types, which are also produced to schedule in small batches with characteristics that are customer-specific in some cases. “The additional capacities will allow us to continue to increase our market leadership,” says Joachim Gersdorf confidently.

### Trend towards high performance polymers

Excellent mechanical properties, electrically insulating, wear and tear resistant, easy to dye, and maintenance-free – this profile of characteristics makes polyacetal (POM) one of the most important technical polymers known. Ticona markets POM under the trade names Hostaform® in Europe and Celcon® in the U.S. You will find POM increasingly used wherever particular demands are placed on



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1. Granulation plant foreman Marcus Feist double-checks Hostaform granules under the light, before they are sent to the customer. Blue coloring # 87 is one of 3,800 different colors that POM is produced in.

2. Polymerization operation, Kelsterbach: Standing on the first floor of the steel framework construction, Carsten Schneider, project head from Siemens-Axiva, explains the current status of the

construction work on the plant expansion to Dr. Joachim Gersdorf, head of Production and Technology.

3. Drying: Checking the inputs and outputs on the two-bed eddy current dryers, which are used to draw moisture, solvents and residual monomers out of Hostaform® granules.

materials. The proportion of POM by weight in cars at the expense of metal and standard polymers has increased at an above-average rate. As the world's leading manufacturer of POM, Ticona, in turn, has particularly benefited from this trend.

### Different customers, different requirements

Having efficient, world-scale plants is an important precondition for product success and cost leadership – however, this alone is not enough to be successful on the market. It is equally important to be flexible and close to the customer. Customers place different demands on the product. While some customers require only the reliable supply of high-quality standard POM, other customers want Ticona's technical service and development support to secure a performance advantage and market success with Hostaform®. These key customers receive our highly recognized problem solving competency and technical service. Our innovations help our customers to succeed.

Following costly purification steps in polymerization, Ticona has succeeded in significantly reducing the proportion of residual monomers in Hostaform®, thus also reducing undesirable emissions, for example in car interiors. The au-

tomotive industry has even made this Hostaform® type the basis for its VDA 275 guideline. Ticona is not resting on its laurels. Today researchers are already working on the next innovation to extend Hostaform's performance advantage. Plans are underway for an additional plant where Trioxan, Hostaform's monomer, will be copolymerized with other monomers. This creates new Hostaform® types bearing completely new characteristics profiles.

### Auburn Hills – a site just for customers

Auburn Hills, a small Ticona site with about 60 colleagues in Sales, Marketing and Technical Service, serves as an important interface between the reactors, distillation columns, and extruders where the polymers are produced, and customer material requirements.

Light floods into the spacious building which houses three different, state-of-the-art injection molding machines, of the kinds used by Ticona customers. On a row of machines at the site, Ticona tests a variety of materials and new polymer parts for its customers. Analysis and test labs for analyzing material properties of the polymers, such as fire-retardance or mechanical stability, are located close by. "Our direct customers, the injection molders, have to meet



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4. The application center in Auburn Hills represents Ticona's focus on its customers. Ticona helps its customers to be successful with its technical expertise and intensive customer care.

5. Stuart Cohen, Auburn Hills site manager, with a dashboard component. Its knobs are made of the newly developed low gloss Hostaform®.



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material or even specific legal requirements of their customers, for example, of car makers. We are well equipped to conduct such tests," said Gayle Hinds, laboratory manager, as she explained the responsibilities of Technical Service.

### **"Our customers' success is our success"**

So explains Eric Pickelsimer, a development engineer for power trains, about the goals and responsibilities of the Application Center. To achieve this success, he spends relatively little time in the office. Most of his time is spent with customers to optimize quality and costs, so that our company can be a partner in future product generations. "We plan to strengthen our direct contact to the car manufacturers in the future. At the end of the day, they are the ones who determine the choice of materials for the next generation of vehicles," says Eric Pickelsimer about the new customer orientation.

"Our unique range of technical polymers for high-tech applications, our ability to innovate, and our good personal contacts put us in an excellent starting position for providing very competent advice to manufacturers of cars and other end equipment." The trend towards using plastics continues for many products and applications, because of

better polymers, better material properties and more cost-effective processability. For Ticona to profit from this trend, it must be involved with customers as early as possible in the product planning phase, so that it can provide the best solutions to meet new demands.

"Our customers have to considerably lower their prices each year, so they expect us to contribute to lowering their costs with our polymers," said Stuart Cohen, Auburn Hills site manager and Technical Services Manager, on Ticona's approach. An example of that is glass reinforced Fortron® polyphenylene sulfide (PPS). This polymer enables complex components to be produced in a few steps and with a limited number of individual parts, thus reducing total costs of the components – although the price for Fortron® is comparatively high.

Today the added value of our high performance polymers not only comes from the molecules and production processes, but increasingly from the close partnerships with our customers and even their customers. The application center in Auburn Hills, located near the three major car manufacturing companies Ford, General Motors and DaimlerChrysler, symbolizes this focus. ◀