



CAQ=QSYS® in the plastics processing industry

Testing the tensile strength of foils

BP Chemicals PlasTec streamlines quality assurance processes using CAQ=QSYS®



Georg Scheitzeneder,
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The more varied the customer requirements and specifications that need to be taken into account in the manufacture of products, the more efficient the control of the production process has to be. So, since 1997 BP Chemicals PlasTec GmbH in Wasserburg on the river Inn has been controlling the quality of its foil production using CAQ=QSYS® from IBS AG. "CAQ=QSYS® enables us to control and guarantee the quality of our foils right along the six manufacturing stages without any problems", says Georg Scheitzeneder when giving the reasons for the use of SPC in production.

BP Chemicals PlasTec GmbH in Wasserburg on the river Inn manufactures a wide range of foils: hygienic/medical foils such as diaper/plaster foils as well as industrial packaging such as packaging films and technical blocking foils for the tire industry. Its customers include renowned manufacturers of disposable diapers who demand high quality standards.

The framework conditions for production methods in the manufacturing industry are to day specified exactly by German or international industrial standards or precise customer specifications. Growing competitive pressure and the call for increasingly shorter development and production cycles make it necessary to pinpoint and eliminate possible sources of errors at an early point of time in the manufacturing process. "If we detect quality defects only at the outgoing lot control or even when the truck is already at the customer's, then it's too late. Today companies can no longer afford this", explains Georg Scheitzeneder. "We have to know the values at the production stage so the machine operator can react immediately if necessary."

Being sure of customer specifications

The foils manufactured by BP Chemicals PlasTec GmbH are semi-finished products that are further processed by the customers. "We have agreed exact specifications for the manufacture of the foils with our separate customers. These

specifications are tracked and recorded by CAQ=QSYS® following customer-specific control plans", explains Georg Scheitzeneder. "The IBS software enables us to control high quality standards right down the line and have to achieve a cpc value of > 1.33." The foils are manufactured from plastic granules in blasting or casting plants and are then embossed, printed or stretched, i.e., to make them thinner, in further manufacturing processes depending on their future field of application, or laminated with tiles or fabrics.

The CAQ=QSYS®-SPC module controls the quality-relevant characteristics based on the customer requirements at each stage of manufacture. Characteristics such as foil thickness, weight-per-unit-area, widths and dimensions are controlled during manufacture by means of various measuring devices and then entered manually in the customer-specific control plans in the SPC module by the machine operator.

The graphic representation in the SPC module enables the machine operator to recognize at a glance whether the values are scattered too much or whether they are distributed correctly. The operator-friendly graphic user interface was one of the crucial criteria that decided BP Chemicals in favor of the IBS solution. "We liked CAQ=QSYS® straight away, the functions for quality control had been implemented very efficiently. Also, CAQ=QSYS® was the only system with a

Windows-like user interface in 1997", is how the quality control officer explains the decision-making process. BP Chemicals has been certified in accordance with DIN EN ISO 9001 since 1994, and until 1997 the control data was entered in the test sheets and control cards by hand. Large amounts of statistical data accrue during the various foil manufacturing processes, thus manual control of the quality criteria became very complex.

Apart from this BP Chemicals PlasTec GmbH prepares a large number of customer-specific certificates that have to tally exactly with the specifications of the respective customer. The advantage of CAQ=QSYS® here was that all control plans and manufacturing specifications that had been prepared using Microsoft Word and that were already available in the company could be completely transferred to the quality control software.

BP Chemicals PlasTec GmbH then commissioned IBS with the job of integrating the tabular record of control values in its SPC as an adaptation of the standard solution. This proved to be very useful in practice owing to the improved user convenience and clarity, so IBS very soon integrated this function into the SPC standard module, thus making it available to all users.

Efficiency through corporate-wide integration

Today certificates for customers are created via Cognos Impromptu because a larger

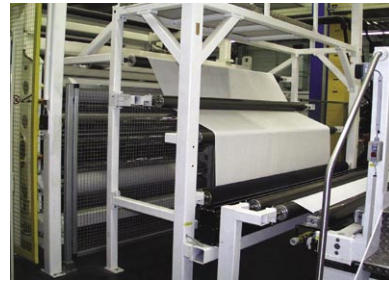
number of different measuring-value and formatting specifications have to be taken into account for each separate customer. The measuring data and analyses are managed by an Oracle 8 database which is accessed by CAQ=QSYS® and Cognos Impromptu. The overall system runs on a Citrix server under Windows NT. The quality control solution was coupled with the MRP system via the Netcom module of IBS, one of BP Chemicals' own developments, on an AS/400. The integration of the quality control and MRP system mean that control plans need no longer be set up by hand. The necessary target values such as, for example, color, length, width of foil, are transmitted directly from the MRP system to CAQ=QSYS® by means of the order number and the control plan number and converted into order-specific control orders. The uniform solution streamlines quality control

during manufacture and, last but not least during the outgoing controls. Since the relevant measuring values are for the most part logged at the separate manufacturing stages by the machine operators they are already available during the outgoing lot control and no longer have to be logged here again. "In the past the outgoing lot control was extremely time-consuming. The entire control data were taken over from handwritten notes and evaluated. Today, the measured values are already available for most control tests and we only have to check certain criteria, for example, strength or breathing activity at the end of the manufacturing process and enter them in the SPC evaluation masks. This shortens the overall manufacturing process and we can deliver the goods more quickly", so Georg Scheitzeneder. By introducing the CAQ=QSYS® quality control solution from IBS, BP

Chemicals created the basis for an integrated IT system for manufacture.

At the next development stage it is planned to record the test data from testing devices like tension testing machines, thickness or color measuring devices no longer by hand but also electronically in CAQ=QSYS®.

Also planned is the tracking of complaints through the integration of the CCM module (Concern and Complaint Management System) in order to determine the causes of internal and external complaints and thus to be able to eliminate interference factors early on in the process. This will ensure shorter manufacturing cycles and will reduce the number of rejects which will lead to reduced manufacturing costs and an increase in profitability.



The system solution - an overview

BP Chemicals PlasTec GmbH

BP Chemicals PlasTec GmbH specializes in the manufacture of polyethylene, polypropylene and polyamide foils for the hygiene/medical sector and industrial packaging. BP Chemicals PlasTec GmbH is an international company with approximately 2,500 employees at nine locations. The plant in Wasserburg /Inn has 325 employees and in the year 2000 this plant generated sales of Euro 65 million.

More information: www.bpcwsb.com

Industry

Plastics processing

Project

Integration of quality assurance according to customer specifications into the separate foil production stages and integration into a proprietary MRP system.

Used products and modules

CAQ=QSYS® with the GMS/MSA, CCM, SAM, SPC, IGC/OGC, Netcom modules

CAQ=QSYS®

CAQ=QSYS® is an integrated software for the full entry, management and analysis of information relevant to quality in manufacturing companies.

It is available in three versions:

CAQ=QSYS® Professional

for applications in any sector

CAQ=QSYS® Automotive

for applications in the automotive industry.

This system also supports specific functions such as assembly inspections, results transfer or reworking control.

CAQ=QSYS® LIMS

Laboratory information and management system for process-oriented companies (e.g. from the food, pharmaceutical and chemical industries). In particular, this product performs laboratory-specific procedures, such as flexible sample generation and recording as well as stability studies.

More information: www.ibs-ag.com

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