



Optimisation by automation

Paul Schreuders and Gianclaudio Borsarelli present details of an XPAR Vision/Bottero strategic partnership to control and optimise the glass container forming process using a combination of their companies' automation technologies.

The glass container production world faces immense challenges. On the one hand, the industry has to deal with increasing customer quality/cost demands while on the other, process efficiency and effectiveness is relatively low and external pressures regarding environmental issues (energy usage, emissions) and alternative packaging solutions are high.

In order to beat competition from alternative packaging materials like PET, cans and cartons, glass container producers are forced to maximise production efficiencies and effectiveness.

With regard to glass container forming, the main and most commonly used performance indicators are pack-to-melt, weight/volume ratio, speed of production, the number of customer complaints and the amount of glassware to be resorted. In an ideal world, glassmakers would have a pack-to-melt efficiency of 100%, a weight/volume ratio that is 30% better than today, a speed that is 30% higher than today, no customer complaints and no resorting! Ideally, the industry

would also have a forming process that is fully controlled, where the outcome is 100% predictable.

Although utopia may seem far away, with so-called automated closed loop systems, it is believed the industry can make a massive step towards this ideal world.

STRATEGIC ALLIANCE

It was about two years ago that XPAR Vision from The Netherlands and Bottero from Italy created a strategic partnership, with the aim of controlling and optimising the forming process by automation, using their respective systems as a basis.

After detailed studies and preparation, the first automated closed loop went under glass last year, to be followed by a number of closed loops with different functionalities. The results so far are exciting. They confirm what was expected beforehand: With these automated closed loop systems, it has been proved that forming process variation and thus forming process performance can be improved dramatically. A leap in improvement is within reach with

regard to pack-to-melt, weight/volume ratio, speed of production, customer complaints and resorting.

The partnership between XPAR Vision and Bottero, as well as the different automated closed loops created, will be marketed under the name BoX. The BoX is black, representing complex software which is easy to use. Because the potential use of the BoX is so huge, it is already designed for the future and is completely modular. Each module can optimise and automate a specific sub-process of the glass forming process. With this modular approach, customers can make a choice for only those modules that have relevance for their specific glass forming process.

During glasstec 2012 exhibition in Düsseldorf (23-26 October), the first modules of the BoX will be introduced and commercially available. It is foreseen that many more modules will appear on the market thereafter.

Available closed loops will be presented in the next issue of *Glass Worldwide*, as well as at the glasstec fair. ■

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