

Gob measurement innovation reflects changing priorities

Many of the world's leading glass container producers were in Germany recently to learn first hand about XPAR Vision's Gob Assist, the latest innovation in hot end monitoring and control and to hear a series of presentations, delivered by prominent industry personalities. *Glass Worldwide* reports exclusively from the event.

An invited audience of 25 leading glassmakers were in Bamberg, Germany last June to attend the seminar organised by Netherlands-based XPAR Vision. Welcoming guests, XPAR Vision's CEO, Paul Schreuders expressed his pleasure that so many key individuals were present from different parts of the world, including Dubai, France, Germany, Italy, Mexico, Morocco, the Netherlands, Poland, South Africa, Spain, Switzerland, Thailand, Turkey and the UK.

Prior to the introduction of XPAR Vision's Gob Assist innovation, selective keynote speakers gave their view of the challenges facing the glass container industry today and in the future:

INDUSTRY CHALLENGES

FEVE Secretary General, Adeline Farrelly reviewed the host of challenges currently facing Europe's glass container producers, including the EU's policy and objectives on CO₂ emission benchmarks and the mechanisms involved (Emission Trading Schemes) and how it affects the glass container industry. Also highlighted were the tools FEVE is presenting to the industry to counter the arguments of PET against glass in

terms of public opinion (eg Life Cycle Analysis for carbon footprint) and promote glass a preferred packaging material by consumers by launching the Friends of Glass campaign.

CHANGING CUSTOMER PRIORITIES

Changing customer requirements formed the basis of a presentation by Oliver Wiegand, CEO of Wiegand Glas, with price, quality, flexibility, increased environmental compatibility requirements and growing competition between different packaging materials as priorities.

To meet these needs, Mr Wiegand proposes reducing costs by utilising different energy sources, using more cullet, reducing personnel and extending the lifetime of equipment, for example. He suggests increasing flexibility with shorter lead times, extended product ranges,

shorter running periods, requiring faster job changes and shorter start-up periods, as well as producing different bottle types on one machine simultaneously. Furthermore, as a means of increasing productivity, he advocates further reductions to container weight, increased machine speeds and higher pack-to-melt ratios, where he emphasises the necessity to measure and control process parameters.

Mr Wiegand addressed various process parameters and possibilities for achieving higher productivity and reproducibility of the forming process. Improvement areas covered included the need for greater consistency in glass melt, in gob loading, machine setup and forming parameters and quality control. The future of glass container glass manufacture needs more automation based on continuous monitoring essential parameters.

HOT FORMING PROJECT

Also participating was Dr Ulrich Roger of HVG and DGG (German Institute of Glass Research and Glass Technology), who described a two year research project on hot forming and the study's goals, homing in on measuring wall thicknesses, connected with the amount of raw material and energy needed. This includes measuring temperatures, energy content, along with speeds and calculating the time-dependant temperature distribution of gobs.

Important parameters highlighted were gob temperature homogeneity at the orifice ring, gob cutting and scoop spraying plus coatings, gob delivery system deflectors and



A group of leading international glass container producers visit Wiegand Glas to see XPAR Vision's Gob Assist innovation in action.

troughs. Gob length, speed and loading to the blank were singled out for special attention, while the temperature regime, hot end movements and transportation were emphasised as critical parameters for the container forming process.

WHY GOB ASSIST?

Primary justification for the attendance of many was to discover the details behind the launch of XPAR Vision's Gob Assist tool. According to the company's co-founder and CSO Joop Dalstra, despite longstanding problems associated with loading variations and the subsequent creation of ware defects, the experienced operator's eye remained the only way to maintain consistent conditions.

After explaining the system's operation to monitor the trajectory of the gob between the deflector and the entrance to the blank mould, Mr Dalstra argued that employing Gob Assist as an 'add on' to the XPAR Vision IR camera system will be indispensable for glass container manufacturers to improve product quality and increase glass forming process capabilities. A series of test results were presented, for example, showing the device recording the effect of deflector adjustments to stable and optimal loading conditions, as well as how the operator can observe and record the gob's geometry and loading position into the blank mould (user interface).

Other examples went into greater details of the impact of changing parameters in the delivery to gob loading, affecting length and speed of the gob, as well as loading position and angle of entrance into the blank mould. Mr Dalstra explained that the Gob Assist system is sufficiently flexible to be integrated into any IS machine configuration currently installed at customers.

CUSTOMER EXPERIENCE

Josef Moehrlin and Ralf Schilling provided customer experience of the Gob Assist tool at Wiegand Glas and Ardagh Glass respectively. According to Mr Moehrlin, the product provided access to previously unavailable data and had given his company valuable benefits and knowledge since installation. Benefits can be found in reduced swabbing and longer stand time of the blanks, less adjustments of troughs and deflectors, verifying bad loading indicators and retrieving the correct deflector position after job changes, resulting in overall stabilisation of the forming process. Later in the day, delegates were afforded the opportunity to view the equipment in operation at Wiegand Glas.

At the time of the Bamberg meeting, the equipment had only been installed at Ardagh Glass in Nienberg for eight weeks but Ralf Schilling was already extremely positive. "It's like being in a dark room and someone switches on the light" he commented. "Now we can see!"

Mr Schilling emphasised that times are changing in the industry, which is no longer driven by the experience of individuals to optimise processes, with no statistical data to back up the changes made and resultant improvements. "We expect to understand the process better, extending the operator's senses and qualifying him to control the process on a higher level." According to Ralf Schilling, the main goal is to make money, so it's necessary to fight on all fronts. "To reach the goal, we have to maximise efficiency and this product will help... the interest from management and specialists is disproportionately high" he confirmed. ■

FURTHER INFORMATION:

XPAR Vision BV, Groningen, The Netherlands
tel: +31 50 316 2888
email: contact@xparvision.com
web: www.xparvision.com