

Generating a better understanding of process and machine behaviour

Supplying production technology to the glass container industry, Heye International has now reached over 1000 process controls delivered to customers. Head of Product Management Hans Renders explains why the Heye Process Control 4.0 (HPC) was the crucial milestone to initiate Industry 4.0 within the glass industry.

The Heye Process Control 4.0 is a closed-loop-solution for the press process of all plunger mechanisms within an IS machine. Simultaneously, it keeps the gob weight stable. Its computer interface displays a number of forming events on selectable charts and allows users to improve parameter setting by comparing data.

Early detection of malfunctions increases production efficiency. The integrated plunger cylinders guarantee precise and consistent parison parameters for press-blow and NNPB production.

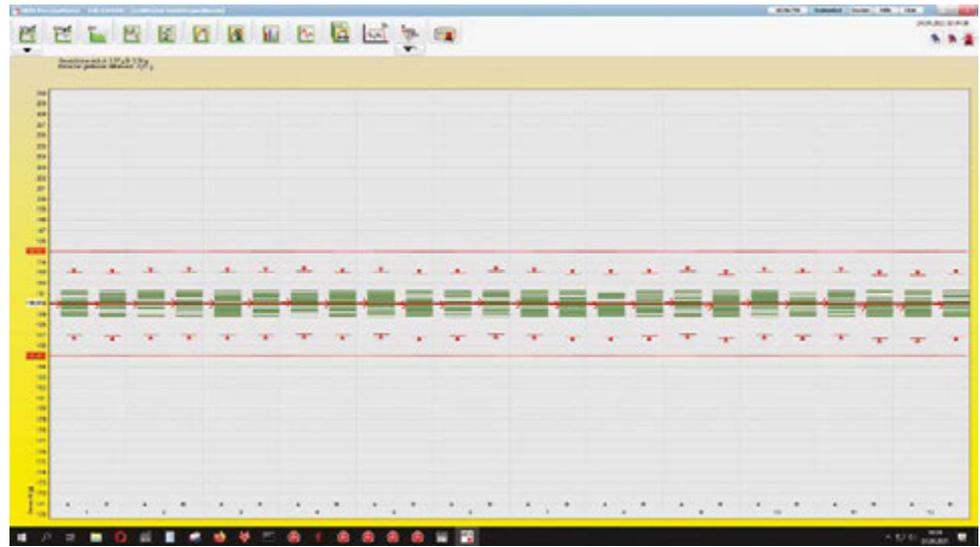
Leading partner for process optimisation

By delivering the 1,000th HPC, Heye comprehensively demonstrated that it has recognised and fulfilled the approach required by the market for stable and sustainable process data management in the past decades. The Heye Process Control is the essential closed-loop- system for every glass manufacturer in order to meet the high quality requirements of NNPB production.

Changes in customers' process



Overview of available functions with the Heye ProcessMaster.



GobMaster weight positions: screen displays value per cavity – same terms and visualisation in all systems (set points and erratic values).

requirements have driven Heye International engineers to modify the Heye Process Control (HPC) from solely a plunger sensor to a holistic solution. The data acquisition from different sensors and the regulation of process parameters are now realised in the Heye ProcessMaster in which the Heye Process Control becomes a subsystem.

Heye ProcessMaster

The Heye ProcessMaster (HPM) is a modular central software solution which is used as a basis for most sensor solutions in hot end production. HPM makes it now possible to implement single sensors as well as complex sensor systems.

These sensors could be, for example:

- The Heye GobMaster for weight control of BB-process and additional information like gob-shape, temperature and dimensions
- The Heye BlankMaster, which monitors different mould part temperatures and gob loading at the blank side
- Stand-alone gob temperature sensor

Data extraction and analysis

All collected sensor and machine data can be used inside the production process to regulate process parameters like gob weight, press duration or mould part temperatures.

All collected process data is stored in the HPM for seven days.

The collected data can also be extracted via Heye SmartLink to be used by a third-party Manufacturing Execution System (MES) to produce a long-term history of all relevant machine and process data. This helps to generate a better understanding of the process and the machine behaviour and consequently to implement optimisations on process and machine.

In addition to all these hardware optimisations, Heye is always in contact with its customers to set up user interfaces for a friendlier and more intuitive operation. Hence, the HPM gets a reworked user interface on each operating system update to help the operator to feel more comfortable and familiar when handling the system. ●

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