

Camera-based weight control provides precise gob management

Plunger cylinder sensor technology is a well-proven function of the Heye Process Control system, supervising and adjusting press-blow and NNPB production processes. Until now, however, these benefits have not been possible for glass container production via blow-blow operation. According to Heye International, the Gob Master system closes this gap, ensuring that sophisticated process control integrates the benefits of visual gob measurement.

Heye Process Control 4.0 is a closed-loop solution for the pressing process of all plunger mechanisms within an IS machine. Simultaneously, it keeps the gob weight stable. The technology displays a number of forming events on several selectable charts and permits the improvement of parameter setting by comparing data.

Early recognition at the start of malfunctions increases production efficiency. The integrated plunger cylinders ensure certain gob parameters for press-blow and NNPB production. For heavy and premium articles produced using blow-blow operation, however, this technology cannot be utilised. Consequently, glass container manufacturers have increasingly requested access to gob supervisory and adjustment technology for blow-blow production as well. The Heye Gob Master satisfies this requirement.

Functionality and benefits

The camera-based system offers the possibility to determine and control

the gob weight and favourably exploits the additionally generated data for all production processes. Two cameras placed underneath the shears act as sensors, generating 3D gob images.

The software logic determines geometric data of these digital 3D models, such as length, diameter, position and tilt angle. This data ultimately calculates the gob volume and weight.

In real-time, the cameras monitor the gob shape and where malfunctions or deviations are identified, the system immediately reacts and the Heye Process Control directly initiates rejection of the article at the hot end. Consequently, Heye stepper motors automatically correct these deviations by mechanically adjusting tube height and plunger position.

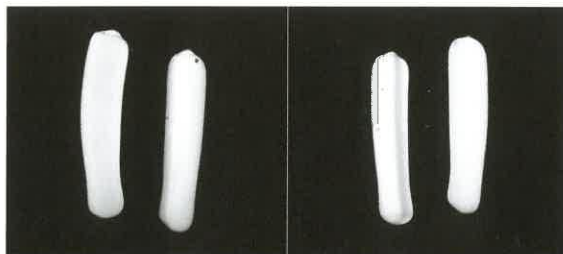
Production runs operating the blow-blow process benefit the most from this recent technology. However, the added value for press-blow and NNPB production runs is also obvious. With Gob Master technology, gob shape and gob fall can be measured,

which is impossible using the plunger cylinder functions alone. Gob shape and weight become reproducible, which results in a stable production process, ultimately improving efficiency and quality. There is no waste of energy or raw materials due to data inaccuracies.

Answered by experts

Heye International experts confirm that the Gob Master can be retrofitted to existing equipment: Where a Heye Process Control system is already available, the latest version can be retrofitted via a plug-and-play device. The Gob Master itself consists of two high speed cameras, a control unit, a water chiller and a monitor.

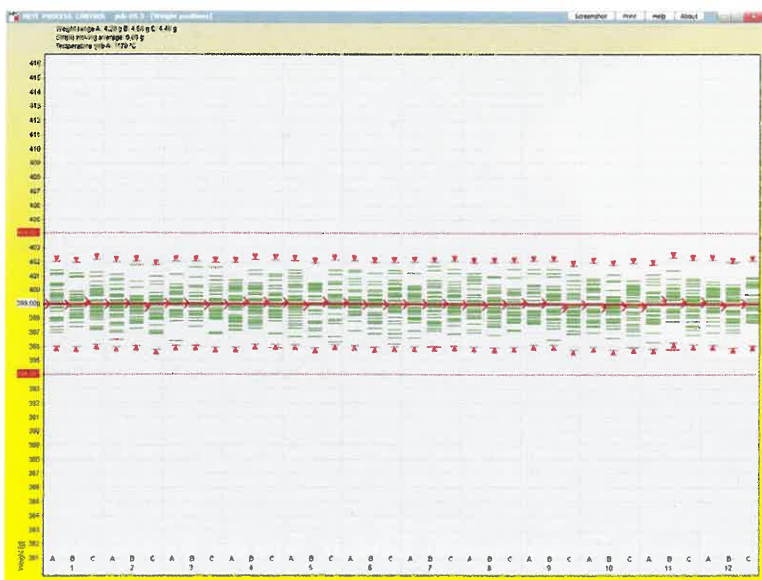
Furthermore, the settings of the Heye Process Control system can be adapted to several gob weights running simultaneously on a single machine. This underlines the flexibility of the system and shows its sophisticated functionality. ●



Live gob forming images.



The Gob Master consists of two high speed cameras, a control unit, a water chiller and a monitor.



Heye Process Control 4.0 with camera system.

Further information:

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