# Maximising the output of your Hot End Process control

## Jean-Vincent Jinot, Hot-End product manager at Tiama, discusses the importance of the Standards of Practices (SOP) when it comes to hot-end process.

A Standards of Practice meeting between glassmakers and Tiama staff.

Tiama developed several sensors capable of characterising the glass forming process. Those sensors, gathered under the brand name of Tiama HOT systems, are able to generate data required to optimise the glass forming process whether it is at the gob cut with the Tiama HOT mass or on the hot end conveyor with the HOT system suite (I-Care, HOT Eye, HOT Form, HOT Move and HOT Finish).

For each of those systems, Standards of Practices have been developed in collaboration with our many customers. Each new system installed and each new customer organisation have been an opportunity to strengthen and further elaborate our SOPs, feeding them with the interaction between our sensors and their data, and the optimal way to make use of these data in the forming process.

After several years of exploitation and more than 100 production teams working with Tiama SOPs, we are in a position to develop methods and guide any new comer in the hot end process control in the most efficient and timely manner.

Tiama trainers, former glass plant experts, deliver the optimum approaches to value the customers' assets.

### The approach

Tiama's methodology distinguishes two major phases:

First, just before the 'go live' stage, the preparation and training phase that corresponds to a transmission of knowledge and SOPs to the teams.

After a presentation of the hot-end product range completed by an introduction of the technologies dedicated to process control, the attendants are guided on how the machines work, how to make use of them, to set them up and how to integrate the machine output into their very own process. Standards of Practice are implemented.

The second phase then starts, during which all SOPs are reviewed and adapted to the glassmaker's specifics, taking into account his installation environment, methods and process constraints, production as well as containers specifics. Once the SOPs are in place, it is time to fine tune the process control.

Based on rich and solid experience from feedback and case studies, Tiama proposes to its customers to adapt to very specific cases its methods. Tiama process and audit experts are deputed to customer lines and disclose all their knowledge to optimise the Tiama HOT systems usage.

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## A full range of sensors

New comers to hot end process control often see the HOT systems as an inspection at the hot end, which it is not. Although they participate to sort the production, this is only a partial output of what Hot Systems provide to the process control. This range is built around sensors with hundreds of parameters collected and organised in order to deliver process data. Tiama, through the transmission of the Standards of Practice, assists its customers in organising their data collection and data valuation. For each production team, Tiama will propose a time schedule, a reaction standard and a decision tree for any specific conditions identified through the Tiama Hot Systems data management.

Implementing Hot end process control with Tiama Hot Systems is a deep evolution in the way IS operators are conducting their process. Tiama offers to accompany this evolution and to have the community of users benefiting from the Standards of Practice developed by Tiama experts in partnership with our Hot Systems historical users. ■

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▲ Tiama HOT mass - sensor at the gob.