Press Release

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PRIAMUS Cool & PRIAMUS Heat – Temperatures under Control!

Besides the filling stage and switchover to holding pressure it is particularly the temperature distribution in the mold which considerably influences the quality of a molded part. In case of a non-uniform temperature distribution in a multi cavity mold the single molded parts shrink under different conditions which results in high variation of the part dimension.
In case of large molded parts warpage has a growing impact with increasing flow length. A different temperature distribution over the cross section inevitably leads to different properties.

PRIAMUS Cool is a closed loop control system (patent pending). Cavity temperatures are measured and analyzed in every temperature controlled zone and automatically adjusted via the set values of the temperature controllers.
The result is a uniform temperature distribution on the surface of the mold cavities which provides optimum conditions for the shrinkage and warpage properties of the molded parts.

PRIAMUS Cool is an integral part of the PRIAMUS Fill system which controls the fill properties of the melt by using the same cavity temperature sensors. Additional sensors are therefore usually not necessary. Especially the combination of controlled fill properties, of automatic switchover to holding pressure as well as of controlled temperature distribution provides the optimum conditions to compensate for instabilities and to avoid scrap.

PRIAMUS Heat is an independent control system for elastomer and thermoset applications. Similar to thermoplastic injection molding the cavity temperatures are determined and analyzed in order to optimize and control the set values of the different heating zones in this case.

The heat dissipation between the heating zones and the mold platen very often results in high thermal differences on the cavity surface. These different temperatures strongly influence the reaction process and lead to unequal part quality.
Due to the closed loop control PRIAMUS Heat reduces these variations clearly and provides so optimum conditions for consistent production of elastomer and thermoset parts.

Practial experience shows that e.g. in case of transfer molding of elastomers the temperature distribution on the mold surface can be reduced from +/- 10 °C to +/- 2°C.

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