

Historical Look Back At Plastic Game Changing Technologies

by

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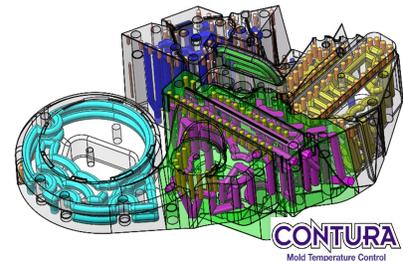
Honored Fellow

Last year, I achieved 50 years of continuous membership in SPE. This experience affords me a historical perspective of the game changing technologies that has formed the plastic industry.

For example, in the mid-1960's the screw injection molding machine entered the market. It replaced the plunger injection molding machine. The screw machine was a game changer. For the next 10 years, the hottest topics in ANTEC and the trade magazines was the development of the various steels for a screw and then the topic was how to accomplish the best design for a screw. Another game changing technology was the use of closed feedback control systems on the press.

Again, in the mid-60's, Whirlpool Marketing wanted to get away from the brown or black phenolic washing machine agitator (15-18 lbs/ea) and go to colorful colors achieved with polypropylene. The first year, the agitators cracked using TIDE as the benchmark. The resin company quickly reformulated for the next year, which was then a game changing success. That was the turning point in the industry to pivot from thermosets to thermoplastics.

We're at another game changing technology, conformal cooling for injection molds, blow molding molds, diecast mold components, etc. Conformal cooled molds have been successfully produced in Europe for 25 years. It has been a stealth technology, because just about everyone involved with a project, has been required to sign a NDA. The rollout of this technology parallels the rollout of the screw injection molding machine. First there was one technology (vacuum brazing) and then another (diffusion bonding) and now many technologies (additive manufacturing, et al) to manufacture conformal cooled mold inserts. After discussing the many technologies for manufacture, the present and next topic is how to optimize design of the conformal channels, since technology has unleashed a freedom of design that has not been available before.



Enter the Conformal Cooling Conference. The goal of the conference is to lift the veil of secrecy to disseminate and inform people of the many benefits of this technology. The conference was held in 2014 in Detroit and in 2015 in Chicago, and in 2017 it will be held in Minneapolis, on May 16-17.

The conference is truly an International Conference. There are 3 companies (4 speakers) coming from Europe to share their knowledge and experience with us. For the very first time, there is a speaker (who is unencumbered from NDA's) coming to North America from Europe who will give a technical presentation on how vacuum brazing and diffusion bonding work to produce conformal cooled mold inserts. There are 3 PhD's who will speak and answer all your questions.

Go to www.ConformalCoolingConference.com for more information

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