SPE Dinner Meeting

The Southern California Section of the Society of Plastics Engineers

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SOCIETY OF PLASTICS ENGINEERS

Dinner Meeting: Valve Gate Systems

"New advancements in applying Hot Runner technologies effectively to challenging Molding applications"

Thursday, January 22, 2015

Jägerhaus Restaurant • 2525 E Ball Rd • Anaheim, CA 92806 • 714-520-9500 • www.jagerhaus.net

Registration: 5:30PM, 6:00PM dinner & presentation

MINIATURIZATION The production of small engineered plastic parts for the molding industry requires quality and process reliability as well as high output rates. This calls for hot runner technologies with individually controlled nozzles for close cavity spacing, systems with direct edge gating and clean room suitable actuations for valve gate systems.

Miniaturization of hot runner nozzles is opening up new ways to cost effectively ramp up to higher cavitation without increasing mold sizes and cavity spacing, which is a critical factor for thermally sensitive resins. Thermal management along the flow path of the hot runner system is vital to successfully process challenging resins with article weights in the less than 1 gram region.

Many small articles in the eg. Medical, Electrical or Consumer molding field require edge gate type designs due to lack of suitable top gate locations. New advancements in edge gate nozzle designs address the difficulties in placing a direct gate on the side. Separate thermal control of main feed tube and edge gate unit opens up new possibilities in molding resins with narrow processing windows.

Along with miniaturization of Valve Gate systems comes the need for suitable small size actuations especially in clean room environments. While separate drive units are no longer possible with close cavity spacing systems a new breed of actuations is emerging, such as Cam Bars and Plate Activators. While pneumatic actuation is commonplace in cleanrooms new linear servo electric motor systems can help to maximize precision and allow variable open and close speeds.

The challenges of molding small size parts with hot runner systems are overcome with new nozzle designs as well as thermal management and new activation methods. These developments are very valuable for any molder looking to utilize hot runner technologies in new and more productive ways.

FREE FLOW Another aspect of quality valve gate molding includes the elimination of flow and knit lines that are sometimes present with conventional valve gate molding. The splitting of the melt flow in valve gate systems is often the cause for weakened areas in the molded article, due to knit lines. In addition this can also lead to cosmetic problems on the surface of the article as observed on covers, lids, lenses etc… A new valve gate design called "Free Flow" addresses these problems and offers a solution by eliminating the split melt.

SPEAKER CV Paul Boettger - Technoject Machinery Corp. Mr. Paul Boettger was born and raised in Germany. After relocating to Canada in 1981 he earned a degree in Chemical Engineering at the University of Toronto in 1986, specializing in Plastics. He started his career in the compounding industry, but soon after took a sales position for Gunther Hot Runner Systems in 1989. Paul then started selling the Heitec Hot Runner System from Germany in 1992. From 2001 on, he has been responsible for distributing the Heitec Hot Runner System in North America.

SPE Event Coordinator: Kerry Kanbara - SoCal SPE, 909-906-2332

Technoject Machinery

Advanced registration is requested. *Register online at* ***www.socalspe.org*** *or* complete the registration form and send by email socal.spe.news@socalspe.org or fax 909-625-2847

Pre-register online or with this form and save $$. (at door price $45.00)

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