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## **PTi is Granted U.S. Patent for Novel Diverter Valve For Multilayer Coextrusion Systems**

*Novel Device Provides Highly Efficient Method  
for Changing Layer Configurations*

**DÜSSELDORF, Germany, October 16, 2013** – Processing Technologies

International (PTi), a leading global manufacturer of high-performance sheet extrusion machinery, has been awarded a U.S. patent for its unique diverter valve which allows processors to quickly change the position of extrudates from two extruders in a coextruded structure without tedious disassembly and costly shutdowns.

Changeovers in piston position due to hydraulic actuation of the piston cylinder and unique flow design are accomplished in a matter of seconds as opposed to conventional techniques which require some machine disassembly and could take up to several hours, according to Dana Hanson, president of PTi. The diverter valve can be utilized on new or existing systems.

“We’ve developed a highly unique capability for changing layer configuration that stands alone in the industry,” said Dana Hanson, president of PTi. “This real-time capability delivers major improvements in efficiency and productivity for processors of coextruded product.”

U.S. patent 8,490,643 was recently granted to PTi. The diverter valve features a dual-piston valve which is moveable in a stationary body. The body has two entrances that feed from separate extruders. The first position of the valve allows the material to

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enter the piston valve and permits a straight through flow path. Normally, this would produce an A-B structure. When the alternated position two is selected, the materials are routed through crossover flow paths that changes extrudate positions. This produces a B-A structure.

During position changes, a unique flushing channel design keeps flow from stagnating for quick and efficient changeovers. The practical use for the diverter valve is its quick “real-time” purging of cap layers in a multilayer co-extrusion structure for sheet production, according to Hanson. The diverter valve enables the processor to purge the cap layer extruder back into the inner layer of the structure while an alternate cap layer extruder runs a specific resin formulation (i.e., different color). Each cap layer (both inner and outer layers) can utilize this special valve to permit this real-time purging for rapid changeovers. This occurs without shutting down the line, thus permitting recovery of the purged resin directly back into the structure instead of losing the material onto the production floor and recovery through a grinder.

PTi currently offers the diverter valve feature on new coextrusion systems or as a retrofit to existing machines.

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#### **About Processing Technologies International LLC (PTi)**

Processing Technologies International LLC, based in Aurora, Ill., is a leading global manufacturer of high-performance sheet extrusion machinery, serving more than 20 countries. Established in 1988, PTi produces and services single-screw extrusion equipment for many end-use markets including packaging, construction, automotive, lawn and garden, office products, signage and displays, and appliances. PTi’s extrusion systems are engineered to exacting standards and offer an exceptional range of design

features which result in superior equipment performance. More information is available by calling (630) 585-5800 or visit [www.ptiextruders.com](http://www.ptiextruders.com).

