ZOTEFOAMS

MuCell Extrusion LLC.

MuCell Extrusion announces the installation of its 30th MTM™ - MuCell Transfer Mixer, just 18 months after product introduction.

28 March 2017 - MuCell Extrusion LLC, a wholly owned subsidiary of Zotefoams PLC, delivers state of the art, proprietary technology to extruders across all applications and markets to produce microcellular foamed product using atmospheric gases nitrogen and carbon dioxide. This technology, first developed at MIT, offers numerous financial, environmental and performance benefits over other foaming methods using Chemical Foaming Agents (CFAs) or Low Pressure Gases (LPGs) consisting of high molecular weight hydrocarbons with various health, safety and environmental hazards.

One of the advantages of the MuCell Extrusion process is that it can be readily adapted to any extruder, however this adaptation requires one critical and often difficult step – porting the extruder barrel for injection of Super Critical Fluid (SCF) atmospheric gas. In 2015, MuCell Extrusion solved this problem by introducing the MTM or MuCell Transfer Mixer. The MTM is an extension to the barrel of an extruder that is attached between the end of the existing extruder barrel and the screen changer. The MTM included a port for SCF injection the upstream flange, follow by and extremely effective mixing section for SCF dispersion as well as temperature homogenization. The MTM's are only 9" to 11" (230 mm to 280 mm) in length, depending upon the diameter, and can be readily accommodated on most extruders with minimal modification.

The MTMs incorporate an independent heating and cooling zone with cast electric heaters and a high capacity blower, and can also be heating and cooled with circulated oil. The MTMs can be supplied with a temperature controller or integrated into the existing panel. The proprietary geometry of the MTM mixing section not only facilitates extraordinary mixing, but also exceptional heat transfer not achievable in a conventional extruder barrel. This combination dramatically improves the effectiveness of the MuCell process, as well as the overall quality of any extruded product.

"In the past, the growth of the MuCell Extrusion business in some areas had been hampered by the cost, time and risk of porting barrels to introduce SCF to the melt stream", said Mark Lindenfelzer, President of MuCell Extrusion LLC. *"Also, in some cases, we were limited by mixing or temperature control. We wanted to bring this mixing technology to the market in a way that minimized conversion cost and downtime while maximizing results."*

To do this MuCell Extrusion developed a modular design that could be mass produced in 3 sizes – 65 mm, 90 mm and 120 mm, quickly and cost effectively, from stock parts with only flanges and rotors customized to fit existing equipment. This assembly line approach has enabled MuCell to design build and ship 30 MTM's in just 18 months.

MTMs are now in service with the MuCell® process across all extrusion platforms including blown film, cast film, flat sheet, blow molding, profile and tubing. MTMs have also been deployed around the world in over 15 countries in North America, Europe, South America, Central America and across Asia. The success of this new product has been an integral part of MuCell Extrusion's great success in rapidly deploying it microcellular, physical foaming technology around the world.