Microinjection Moulding – A New Avenue in Manufacturing

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Abstract

The Research and Knowledge Transfer Centre for Polymer Micro and Nano Technology (Polymer MNT) is a leading facility within the Polymer Interdisciplinary Research Centre (Polymer IRC) at the University of Bradford. It has evolved over more than 10 years to provide a focal point to allow access to equipment and the expertise required for companies of all sizes to develop a successful micromoulding or nano scale surface feature moulding process.

Since its establishment, the Centre has been approached by numerous companies seeking expertise to enable them to get a product to market. It is currently undertaking research and development in application areas such as dental components, surgical devices, micro implants, micro optics, energy harvesting devices and anticounterfeit technologies. The nature of the work can range from a raw concept for a device that needs a full process specification to get it into the marketplace, to an existing product that requires refinement or redesign to reduce cost or increase functionality. Polymer MNT offers assistance throughout the evolution of the manufacturing process from materials formulation through to processing stages, robotic handling/automated inspection systems, and Internet-based data management and control systems to provide full traceability at each stage.