The Application of Injection Molding on Micro-Pump Manufacturing

徐瑋傑、吳政憲

E-mail: 9314500@mail.dyu.edu.tw

ABSTRACT

Along with 21st century knowledge economy time approaching, the high tech industry pulsation acceleration, the micro mechanical and electrical technology gradually forms for needs the special community technology the emerging industry, fluid transportation use widely causes the micro class part and the micro class system development is vigorous, but micropump (micropump) the use is many fluids transmits a procedure essential link. For example, biomedicine examination, chemical analysis examination, medicine examination, medicine transportation and so on, therefore, may know importance of the its application. In the entire research process, first designs the micro pump finished size and the mold structure, partially uses the mold kernel the microelectric discharge way and in the microcomputer electricity system LIGA system regulation technology electrolytic casting system regulation (Electroforming) and the general traditional processing way completes, finally the mold kernel partial assemblies in on the mold male mold and the female mold, then to micro projects takes shape makes the micro pump the main structure. To differently projects the parameter in this research to control the micro pump end product the formability, again will project takes shape the after micro pump end product so as to the piezoelectricity piece actuation, will cause in the micro pump cavity room the fluid, will transport the current capacity by the micro thin film vibration way, will discuss the micro pump the flow quality.

Keywords : Micropump, microcomputer electricity system, electrolytic casting, piezoelectricity piece

Table of Contents

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