Injection Molding Quality Improvement by Advanced Virtual Simulations

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Main aim of this article and research is to describe exact influence of key parameter in injection molding process. This key parameter is temperature. Nowadays is possible to use wide range of advanced virtual simulation tools, which were in research used. Article is focused on determining optimal temperature of injected plastic material, temperature of mold and temperature of coolant. For veryfing of virtual method was performed real injection molding with same input parameters and results were compared. For evaluating of achieved quality was investigated influence on whole molding process and influence on final product properties. As testing material was choosen High- Density Polyethylene with properties described in article.

Keywords: Injection Molding, Virtual Simulation, Plastics, Temperature

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