Supramolecular Structure of Polymers and its Effect on Surface Quality of Injection Molded Parts Using Various Surface Quality of Cavities

Ondřej Bílek[1], Ladislav Fojtl[1,2], Vladimír Pata[1], Jiří Čop[1]
[1]Department of Production Engineering, Faculty of Technology, Tomas Bata University in Zlín. Vavrečkova 275, 760 01 Zlín. Czech Republic. E-mail: cop@ft.utb.cz, fojtl@ft.utb.cz, bilek@ft.utb.cz, pata@ft.utb.cz
[2]Centre of Polymer Systems, Tomas Bata University in Zlín, Trida Tomase Bati 5678, 760 01 Zlín, Czech Republic

This article is focused on influence of finishing operations on the surface quality of polymer products. Finishing operations are the necessary part in the production of injection mold cavities. Surface quality of cavities is reflected to quality of future polymer products. Therefore, it is very important to use appropriate finishing operations and its technological conditions from the aesthetic point of view. However, it is not always necessary to use time consuming and most expensive finishing operations, because the polymeric products are not able to achieve similar surface quality as cavities. The different surface quality of injection molded parts can be also expected using various supramolecular structure of polymer (amorphous, semicrystalline). Supramolecular structure of polymer determines the future properties of product as well as the distribution of the individual macromolecules in the polymer chain. Divergent distribution may result to achievement of different surface quality of injection molded parts. This research is focused on finding an influence of supramolecular structure of chosen polymer on the surface quality of polymer product.

Keywords: Surface quality, Injection molding, Supramolecular structure of polymers, Finishing operations

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