

COMPARATIVE STUDY ON HEAT TRANSFER OF PLASTIC INJECTION MOLDING PROCESS FOR QUALITY ENHANCEMENT

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ABSTRACT

From the decades injection molding is one of the favoured manufacturing methods used in manufacturing industries. In this method the granular plastic are fed through hopper and the presence of pressure the melted plastic material is injected into the cavity and acquired final products. It is very useful for mass production processes with variety of application such as automobile, toy, bottle, chair, computer part etc. The molded part may classify into four categories-part design, mold design, machine performance and method conditions. With optimum design of these categories the performance of injection molding process may increase. The main aim of this paper is to compare the mode of heat transfer, cooling time, product quality of different plastic materials used in injection molding process as well as the design parameters are summarised for optimal design of injection molding process for product quality and performance enhancement.

