

Design-oriented manufacturing of injected plastic products

Osiris Canciglieri Junior, Alfredo Iarozinsk Neto

Abstract: Concurrent engineering is an important concept to achieve better time to market in new product development. While the use of design teams has attained some measure of success, there is a need for radical improvement of modern software tools to support the design process. This paper offers a contribution to the area of decision support systems based on the use of product and manufacturing models to provide appropriate information. The design of manufacturing systems typically provides support for only one process, e.g., assembly design, machining design, etc. However, when one considers the full scope of manufacturing design, it is obvious that many aspects must be addressed. This leads to the need for information systems that can support multiple views of a product, with each view providing the proper representation to support one manufacturing perspective. This paper discusses the requirements of an intelligent system which is able to provide multiple views of a product and which can provide mechanisms to shift from one viewpoint to another. The research focuses on injection molding and considers viewpoints such as product functionality, product moldability, mold design elements and mold manufacturing viewpoints. A case study product is discussed to illustrate the approach employed here.

Keywords: concurrent engineering, features technology, machining, product modeling and product moldability,

Download PDF



Close window

