

應用知識工程建構玻璃瓶專業化CAD建模系統

徐永源, 陳俞帆

機械工程學系

工學院

janason@chu.edu.tw

摘要

The process of traditional glass bottle design is highly-dependent on the experience of the designers and the technique of mould workers, which is time-consuming and labor-intensive in the calculations and drawing. It is heavy-loading work and has a high error frequency, which indirectly slows down design and decreases work efficiency. Therefore, the intellectualized improvement of glass bottle design is an important subject in the CAD design. In this study, Knowledge Based Engineering (KBE) is introduced into glass bottle design, utilizing the UG/KF language of a secondary development tool from Unigraphics (UG) software to develop a professional CAD mould-building system with a Product Knowledge Database as the core. This system will be able to realize a novel way of designing with a knowledge base, accelerating the work of designers; it will further shorten the product development cycles for enterprises and improve their high-technology innovation abilities. In summary, by establishing knowledge base mould construction with optimal design, this study proposes an ideal method for glass bottle design, hoping to cut down the time required for contour design and the manufacture process of the glass bottles. This will increase the response time to market demand and improve the competitive ability of enterprises.

關鍵字 : Keywords: Glass products, Customization, Knowledge based engineering, Optimization.