Trends and Developments in Intelligent Computer Aided Design of Progressive Dies

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Abstract. This paper discusses the trends and developments in intelligent CAD of progressive die. The research efforts reviewed reveal the growing importance and relevancy of particular AI techniques for automation of progressive die design activities. Based on the knowledge base approach of AI, an intelligent CAD framework is developed and presented in this paper. The proposed intelligent CAD framework comprises different knowledge base modules for automating progressive die design process. The procedure for the development of various knowledge base modules of the proposed intelligent CAD system is described through module CCKBS which has been designed for assessing manufacturability of sheet metal parts. An illustrative example has been included for demonstrating the usefulness of the developed module CCKBS. The system framework is flexible enough to accommodate new acquired knowledge for each module. The modules of the system framework are implementable on a PC and thus can be affordable by small and medium size enterprises.