

An Investigation into the Application of Group Technology in Advanced Manufacturing Systems

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Abstract

During the last two decades, firms have undergone a great change in their production methods and technologies because of the emergence of new manufacturing concepts and technologies. Traditional concept like group technology (GT) still plays a significant role in new manufacturing concepts such as just-in-time (JIT) and total quality management (TQM), and technologies such as flexible manufacturing systems (FMS), optimized production technology (OPT) and computer integrated manufacturing systems (CIM). In manufacturing systems, GT helps to achieve a reduction in setups, inventory level, and transportation time of goods, and provides an effective control of production. Considering the importance of GT in JIT, FMS, OPT and CIM, the available GT literature has been reviewed in this paper with the objective of studying GT techniques/models and their applications. In addition, frameworks are provided for future research directions in the areas of GT to enhance the applications of GT and its techniques/models.

(International Journal of Computer Integrated Manufacturing Vol. 7 (1994), No. 4, 215228)