Optimization Models for Scheduling in Prinated Circuit Board Production

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This paper presents the optimization model for the scheduling in the new product development process of a Printed Circuit Board company, where n type of PCBs or simply n boards are to be processed by m different machines. In the product development process, many tasks must satisfy regulatory requirements and technological precedence constraints. A general objective in most product development process is to minimize the total makespan and changeover. However, scheduling is complex problem, usually dealt in stages, but this approach may not yield a good solution. . We model the problem in an integrated manner by using weighted multiple objectives to deal with the board grouping and lot streaming. The application of the model is illustrated with the example of Printed Circuit board company using tabu search method.