

Modeling Manufacturing Cell Design Problems: CP vs. MH

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The manufacturing cell design problem aims at organizing a manufacturing plant in cells that contain machines processing parts from a same family for a given product. The purpose is to minimize the flow of parts among cells so as to increase productivity while reducing costs. This paper focuses on comparing metaheuristics and constraint programming -from a modeling standpoint- when used to solve this problem. © Springer International Publishing Switzerland 2014.

Constraint Programming

Manufacturing Cell Design

Metaheuristics

Computer programming

Constraint theory

Flexible manufacturing systems

Heuristic algorithms

Product design

Cell design

Constraint programming

Manufacturing plant

Meta heuristics

Reducing costs

Problem solving