

Design and Implementation of Cellular Manufacturing in a Job Shop Environment

by

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Abstract

The thesis proposes a method for introducing cellular manufacturing in an operating job shop. By applying cellular manufacturing to produce part families with similar manufacturing processes and stable demand, plants expect to reduce costs and lead-times and improve quality and delivery performance. The thesis outlines a method for assessing, designing, and implementing cellular manufacturing, and illustrates this process with an example. A manufacturing cell that produces aluminum parts for commercial customers is implemented at Boeing's Defense and Space Group Machining Center. The conclusions of the thesis highlight the key lessons learned from this process.

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