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Abstract

The conceptual design of a manufacturing cell for a small-batch manufacturer is discussed in this report. The cell produces small parts with dimensional tolerances of ± 0.005 inch (.13mm) using a minimum of machining equipment. The cell design emphasizes near-term technology and uses off the shelf items where possible. The proposed cell can run unattended for a moderate period of time (eg. over-night). The design philosophy is to treat the cell components and control programs as discrete modules in a hierarchy. The resulting cell is easily integrated into a larger system. It is also readily modified or expanded as more sophisticated equipment and techniques become available.

