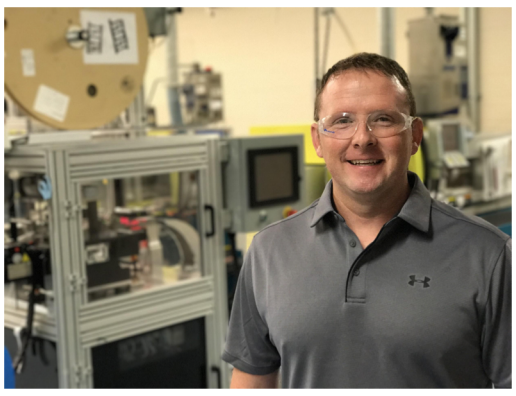
Tool Making & Injection Molding



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Part I: Overview of Business

Accumold designs and builds molds, manufacturing cells and produces micro/small injection molded parts used in various industries (automotive, medical, communication, military, aerospace, optics).

Part II: Job Specifics

- Majority of work involved machining of manufacturing cell components and assembly/set-up/ updating of manufacturing cells for automation
- Other work included producing employee visual aids, advising human resources with employee training, and assisting with preventative maintenance schedules for robotics.

Part III: Introduce the Problem

- Not a specific problem, the experience was part of the regular production of plastic injection manufacturing cells.
- Machining of cell components to within ± 0.0005 inch. Standard practice by tool/mold makers is to work to within ± 0.0001 inch.
- Attach safety systems, sensors, and utilities to manufacturing cells.

Part IV: Background

Reading a blueprint, safe operation of manufacturing equipment, inspect, clean, organize work areas, understand metric and English systems of measurement, measure parts using precision equipment, apply jigs and fixtures for machine operations, set up and use precision machining equipment, material conditioning /finishing/separating processes,

Part V: Business Solution

In teams, problems are identified, solutions are agreed upon, tasks are assigned, completion target dates are scheduled, and results reported to leadership.

Part VI: Student Solutions

Current course projects in Computer Aided Design (manufacturing/solid modeling/reverse engineering) will evolve to include aspects of mold making, injection molding, and quality control.