Keying Process

Benjamin Shaver  
_Iowa State University_, bshaves@iastate.edu

Jacob Raveling  
_Iowa State University_, raveling@iastate.edu

Mary Gail Knutson  
_Iowa State University_, mgk@iastate.edu

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**Keying Process**

**Cardinal IG Co, Greenfield, IA**

**Problem Statement**
The current process for setting guide keys into aluminum extrusions is performed manually. It is a tedious and unergonomic process. The team needs to evaluate the process for improvement or replacement.

**Objective(s)**
- Improve process to reduce cycle time by 15%
- Improve overall ergonomics of the process

**Constraints**
- Complete before end of TSM 416
- Budget constraints

**Scope**
- Analyze current process/ergonomics
- Develop improved process
- Test new design
- Implement final solution
- Final process time study
- Evaluate final ergonomics
- Completing class deliverables
- Background research

**Plan**
- Includes site visits, time trials, and ergonomic surveys

**Do**
- Background research into other processes used in industry
- Create a new tool or setup to improve current process

**Check**
- Check that the solution meets the clients needs

**Act**
- Provide a final design and time study to sponsor
- Suggest changes to improve the ergonomics of the workstation

**Methods**
- Ergonomic survey for current process and proposed process
- Time study for analyzing cycle time reduction

**Proposed Solutions**
- Improve current process
- Deploy a new process
- Encourage ergonomic improvements

**Major Outcomes**
- Assessment of current process for inefficiencies and ergonomic strain
- Cost benefit analysis and ergonomic assessment of each recommendation
- Implementation of recommendation
- DMAIC/PDCA plan for future improvements

**Benefit to Client**
- Reduction of manager’s wasted time
- Improved process ergonomics
- Ergonomic recommendations for workstation
- A plan for continuous improvement

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