



CONTINUING EDUCATION

## **Set-up Reduction SMED – Single Minute Exchange of Dies**

**CEQAL 608**

### ***What is Set-up Reduction?***

Set-up Reduction builds on the principles of the Single Minute Exchange of Dies (SMED) system, developed by Shigeo Shingo, to dramatically reduce or eliminate changeover time. The four-step Changeover Improvement Process is used to help companies design no/low cost solutions to reduce changeover time. Companies that used SMED tools to ensure that changeovers are quick and relatively simple are typically much more agile: they can quickly change production operations to satisfy changing customer requirements. Increased responsiveness, in turn, allows the firm to meet customer demands for high-quality, low-cost products, delivered quickly without holding expensive excess inventory.

Use this workshop to learn the principles and how to apply the Single Minute Exchange of Dies (SMED) system. Apply the four-step Changeover Improvement Process to reduce setup times in a life-like simulation exercise. At the conclusion of the class participants will understand how applying SMED will reduce both setup times and costs and how machine capacity will be increased.

### **Benefits:**

- Respond to customer needs and schedules with more flexibility
- Improve on-time delivery
- Decrease costs due to excess inventory
- Increase line and machine capacity levels
- Increase changeover accuracy
- Reduce startup defects

**Prerequisite:** None

**CEU's Credits:** .8

**Duration:** 8 Hours

## **Course Content:**

### **Greeting & Introduction**

- Introduction
- Agenda
- Objectives

### **Kaizen and Kaizen Events**

- What is Kaizen?
- Kaizen is a Way of Life
- Kaizen Events
- Kaizen Event Methodology
- Example: 5 Day SMED Event
- Kaizen Event Methodology Day 1-5
- Kaizen Team Philosophy and Mindset
- Kaizen Newspaper

### **Introduction to Setup Reduction**

- Definition of Changeover
- Traditional Changeover
- Traditional Changeover and the Wastes of Lean
- Changeover Improvement Process

### **Current vs. Future State**

- Current State
- Traditional Changeover
- Future State/Winner's Circle Video
- What Does Quick Changeover Involve?
- Quick Changeover
- Impact of Quick Changeover

### **Production Round 1**

- Document the Changeover
- Production Round 1
- Changeover Documentation Tools
- Round 1 Debrief

### **Single Minute Exchange of Dies (SMED) Method**

- 5S System in Action
- Visual Controls
- Basic SMED Principles
- Three Stages of SMED
- Separate Internal and External Setup
- Develop and Implement Changeover Checklists
- Perform Function Checks on Parts and Tools
- Reduce Transportation of Tools, Parts, Materials

- Convert Internal Setup to External Setup
- Prepare Operating Conditions in Advance
- Standardize Functions
- Intermediary Jigs
- Implement Parallel Operations
- Eliminate Need for Adjustments
- No/Low Cost Solutions

### **Applying SMED**

- Analyze Tasks and Identify Improvements
- Applying SMED
- Setup Analysis Chart
- Applying SMED debrief

### **Production Round 2**

- Implement Improvements and Monitor Results
- Production Round 2
- Round 2 Debrief
- Standardize Improvements

### **Summary and Evaluation**

- Benefits of Quick Changeover
- Keys to Success

***Each participant will receive a comprehensive manual and a Certificate of completion at the close of the seminar.***