

# Statistical Process Control (SPC) Training (Advanced)

## **SECTION 1**      *CONTINUOUS IMPROVEMENT*

- Definition of Quality
- Taguchi Loss Function
- "Common" and "Special" Causes
- PDSA (Plan Do Study Act) Cycle
- Team Building

## **SECTION 2**      *INTRODUCTION TO CONTROL CHARTS*

- Variable vs Attribute Data
- Stem and Leaf Diagram
- Run Charts: Description, Exercise
- Consistent versus Inconsistent Processes
- Overcontrol/Undercontrol: Funnel Experiment (video)
- Basic Description of Control Charts

## **SECTION 3**      *BASIC STATISTIC*

- Video Tape: ("Statistic at a Glance")
- Mean, Standard Deviation and Variance
- Normal Distribution
- Central Limit Theorem

## **SECTION 4**      *X-BAR (AVERAGE) AND R (RANGE) CHARTS*

- Description, Construction and Interpretation
- Shewhart Bowl Exercise



**SECTION 5**      *BASIC TOOLS*

- Data Collection
- Pareto Analysis
- Flow Charts
- Cause and Effect Diagrams
- Histograms, Scatter Diagrams
- Tape: "Continual Improvement... U.S. Style"

**SECTION 6**      *CHARTS FOR INDIVIDUALS*

- Description, Construction and Interpretation
- Example

**SECTION 7**      *CONTROL CHARTS FOR ATTRIBUTES*

- p and np Charts
- c and u Charts

**SECTION 8**      *SUMMARY AND REVIEW*

- Control Chart Selection
- Project Assignment