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I PURPOSE

The purpose of this procedure is to provide for a system and instructions, and to assign responsibilities for management and coordination of the continuous improvement program.

II APPLICATION

This procedure applies to all activities that affect products and services, quality, and cost.

This procedure concerns all departments, and in particular executive management and Quality Assurance.

III PROCEDURE

1. General

- 1.1 <COMPANY X> Inc. deploys continuous improvement philosophy throughout the entire organization. Continuous improvement is emphasized in the quality policy and is implemented through the system defined in this procedure.
- 1.2 Quality Assurance is responsible for establishing and coordinating the continuous improvement program, and for reporting progress and results to the executive management.
- 1.3 Everyone in the organization is encouraged to come forward with ideas for improving products, processes, systems, productivity, and working environment. Improvement suggestions are evaluated and prioritized by Quality Assurance.

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2. Process Improvement

- 2.1 Once processes have demonstrated stability and acceptable capability, process performance is monitored by appropriate charting of process performance data (refer to Procedure OOP-09-03, Statistical Process Control).
- 2.2 Production Engineering reviews process performance data and, when improvement is desirable, establishes specific action plans to improve selected processes. Process improvement projects are initiated only when further process improvement benefits the customer, i.e., when reduction of variation around target value is important for the customer.

3. Quality and Productivity Improvements

- 3.1 For the purpose of identifying improvement opportunities, <COMPANY X> Inc. continuously operates the following performance monitoring systems:
 - Cycle times — recorded in production work orders (Procedure OOP-09-01) and reviewed for trends by Production.
 - Scrap, rework, repair rates — recorded in nonconformance reports (Procedure QOP-13-01) and reviewed for trends by QA.
 - Unscheduled machine downtime — recorded in equipment maintenance log (Procedure OOP-09-04) and reviewed for trends by Production Engineering.
 - Process performance variation — recorded in process control charts (Procedure OOP-09-03) and evaluated for trends by Production Engineering.
 - First-run capability — recorded in job set-up control charts (Procedure QOP-09-03) and evaluated for trends by Production Engineering
 - Effectiveness of training — recorded in training evaluation reports (Procedure AOP-18-01) and evaluated for trends by departmental managers.
 - Effectiveness of quality system — recorded in internal audit reports (Procedure QOP-17-01) and evaluated for trends by executive management.
 - Customer satisfaction levels — recorded in customer satisfaction surveys and reports (Procedure AOP-01-02) and evaluated for trends by executive management.
 - Customer complaints — recorded in customer complaint log (Procedure MOP-14-02) and evaluated for trends by executive management.
 - Measurement systems capability — recorded in measurement system evaluation reports (Procedure QOP-11-02) and evaluated for trends by Quality Control.
 - Subcontractor quality performance — recorded in subcontractor quality performance files (Procedure OOP-06-01) and evaluated for trends by Purchasing and Quality

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Assurance.

- On-time delivery performance — recorded in delivery performance reports (Procedure OOP-15-04) and evaluated for trends by Materials Control and executive management.
- 3.2 In addition to the above-listed systems for continuous performance monitoring, special assessment projects may be initiated to identify opportunities for improvement in other areas. Examples are:
- Machine set-up and tool changeover times,
 - Non value-added use of floor space,
 - Excessive testing not justified by accumulated results,
 - Waste of labor and materials,
 - Excessive cost of non-quality, and
 - Excessive handling and storage.
- 3.3 Continuous performance monitoring systems and special assessment projects provide data for effective identification of needs and opportunities for improvement. Quality Assurance is responsible for initiating specific continuous improvement projects, and for monitoring and reporting achieved results.

4. Techniques for Continuous Improvement

- 4.1 Following techniques for continuous improvement are used when appropriate:
- Capability Indices (Cp, Cpk)
 - Control Charts
 - Cumulative Sum Charting
 - Design of Experiments
 - Evolutionary Operation of Processes
 - Theory of Constraints
 - Overall Equipment Effectiveness
 - Cost of Quality
 - Parts Per Million Analysis
 - Value Analysis
 - Problem Solving
 - Benchmarking

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- Ergonomics
 - Mistake Proofing
- 4.2 Quality Assurance maintains a list of individuals in the company who are knowledgeable in the above-listed methods and techniques. The knowledge may be acquired through self-study, i.e., by reading books, articles, etc. (refer to Procedure AOP-18-01 Training).

IV ASSOCIATED DOCUMENTS

- Management Review — Oper. Proc. AOP-01-03
- Corrective and Preventive Action — Oper. Proc. QOP-14-01