



8

MEASUREMENT, ANALYSIS AND IMPROVEMENT

*GENERAL POLICY*

Solon Manufacturing Company plans and implements monitoring, measurement and improvement processes. Methods used and areas considered include customer satisfaction, internal audits, monitoring and measurement of processes, monitoring and measurement of product, control of nonconforming product, analysis of data, continual improvement, corrective action and preventive action.

PROCEDURAL POLICIES

8.1 General

1.1 Solon Manufacturing Company plans and implements the monitoring, measurement, analysis and improvement processes needed

- a) to demonstrate conformity to product requirements,
- b) to ensure conformity of the quality management system, and
- c) to continually improve the effectiveness of the quality management system.

This includes the determination of applicable methods, including statistical techniques, and the extent of their use.

8.2 Monitoring and Measurement

1.1 Solon Manufacturing Company monitors information relating to customer perception as to whether the organization has fulfilled customer requirements. The methods for obtaining and using the information are determined and are outlined in P-SCS Sales Customer Service.

1.2 As outlined in P-8.2.2, Internal Audit, Solon Manufacturing Company conducts internal audits at planned intervals to determine whether the quality management system

- a) conforms to the planned arrangements, to the requirements of this International Standard and to the quality management system requirements established by the organization
- b) is effectively implemented and maintained.

1.3 The audit program is planned, taking into consideration the status and importance of the processes and areas to be audited, as well as the results of previous audits. The audit criteria, scope, frequency and methods are defined in P-8.2.2, Internal Audit. Selection of auditors and conduct of audits ensures objectivity and impartiality of the audit process. Auditors do not audit their own work.

1.4 The responsibilities and requirements for planning and conducting audits, and for reporting



results and maintaining records are documented in P-8.2.2, Internal Audit.

- 1.5 Management responsible for the area being audited ensures that any necessary corrections and corrective actions are taken without undue delay to eliminate detected nonconformities and their causes. Follow-up activities include the verification of the actions taken and the reporting of the verification results. P-8.5.2, Corrective Action, outlines these activities.
- 1.6 Solon Manufacturing Company applies suitable methods for monitoring and, where applicable, measurement of the quality management system processes. These methods demonstrate the ability of the processes to achieve planned results and are outlined in P-TM Top Management. When planned results are not achieved, correction and corrective action is taken, as appropriate, to ensure conformity of the product.
- 1.7 Solon Manufacturing Company monitors and measures the characteristics of the product to verify that product requirements have been met. Methods utilized are outlined in P-Q Quality and P-Mfg. Manufacturing. Activities are carried out at appropriate stages of the product realization process in accordance with the planned arrangements (some may be documented as defined on F7101 Planning of Product Realization checklist and Control of Monitoring and Measurement Equipment.
- 1.8 Evidence of conformity with the acceptance criteria is maintained. Records indicate the person(s) authorizing the release of product for delivery to the customer.
- 1.9 Product release and delivery of service to the customer does not proceed until all the planned arrangements, (as outlined in P-SCS Sales Customer Service clause 7.1); have been satisfactorily completed, unless otherwise approved by a relevant authority, and where applicable by the customer.
- 8.3 Control of Nonconforming Product
  - 1.1 Solon Manufacturing Company ensures that product which does not conform to product requirements is identified and controlled to prevent its unintended use or delivery. The controls and related responsibilities and authorities for dealing with nonconforming product are defined in P-8.3, Control of Nonconforming Product.
  - 1.2 Where applicable, Solon Manufacturing Company deals with nonconforming product by one or more of the following ways:
    - a) by taking action to eliminate the detected nonconformity;
    - b) by authorizing its use, release or acceptance under concession by a relevant authority and, where applicable, by the customer;
    - c) by taking action to preclude its original intended use or application:
    - d) by taking action appropriate to the effects, or potential effects, of the nonconformity when nonconforming product is detected after delivery or use has started.



- 1.3 When nonconforming product is corrected it is subjected to re-verification to demonstrate conformity to the requirements.
- 1.4 Records of the nature of nonconformities and any subsequent actions taken, including concessions obtained, are maintained.
- 8.4 Analysis of Data
  - 1.1 Solon Manufacturing Company determines, collects and analyses appropriate data to demonstrate the suitability and effectiveness of the quality management system and to evaluate where continual improvement of the quality management system can be made. The presentation and use of this data is outlined in P-T.M. Top Management. This includes data generated as a result of monitoring and measurement and from other relevant sources.
  - 1.2 The analysis of data provides information relating to
    - a) customer satisfaction (as outlined in P-SCS Sales Customer Service)
    - b) conformance to product requirements (as outlined in P-Q Quality and P-Mfg. Manufacturing)
    - c) characteristics and trends of processes and products including opportunities for preventive action (as outlined in P-8.5.3 Preventive Action and P-T.M. Top Management)
    - d) suppliers (as outlined in P-PUR Purchasing).
- 8.5 Improvement
  - 1.1 Solon Manufacturing Company continually strives to improve the effectiveness of the quality management system through the use of the quality policy, quality objectives, audit results, analysis of data, corrective and preventive actions and management review. P-T.M. Top Management outlines steps used by Solon Manufacturing Company to manage the continual improvement process. P-8.2.2 Internal Audit, P-8.5.2 Corrective Action, P-8.5.3 Preventive Action.
  - 1.2 Solon Manufacturing Company takes action to eliminate the cause of nonconformities in order to prevent recurrence. Corrective Action is appropriate to the effects of the nonconformities encountered. P-8.5.2, Corrective Action has been established to define requirements for
    - a) reviewing nonconformities (including customer complaints as outlined in P-8.5.2 Corrective Action),
    - b) determining the causes of nonconformities,
    - c) evaluating the need for action to ensure that nonconformities do not recur,
    - d) determining and implementing action needed,
    - e) records of the results of action taken
    - f) reviewing corrective action taken.



- 1.3 Solon Manufacturing Company determines action to eliminate the causes of potential nonconformities in order to prevent their occurrence. Preventive actions are appropriate to the effects of the potential problems. P-8.5.3, Preventive Action has been established to define requirements for
- a) determining potential nonconformities and their causes,
  - b) evaluating the need for action to prevent occurrence of nonconformities,
  - c) determining and implementing action needed,
  - d) records for the results of action taken, and
  - e) reviewing preventive action taken.

DOCUMENTATION AND REFERENCES

- P-SCS Sales Customer Service
- P-Q Quality
- P-T.M. Top Management
- P-SCS Sales Customer Service
- P-PUR Purchasing
- P-8.2.2 Internal Audit
- P-8.3 Control of Nonconforming Product
- P-8.5.2 Corrective Action
- P-8.5.3 Preventive Action
- F7101 Planning of Product Realization
- P-7.6 Control of Monitoring and Measurement Equipment

Date	Pg	Par.	Summary comments