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Problem: Kent Adhesive Products Co. (KAPCO), a small manufacturing company involved in automotive, electrical and medical products, began to see prime contractors demanding more evidence of quality in their products.

Solution: KAPCO decided to pursue ISO certification to meet these growing requirements and to distinguish themselves from their competitors. KAPCO hired a consultant to conduct:

- a needs assessment,
- classroom training in ISO, and
- on-site consultation to implement this QA system

The results were that KAPCO saved over \$100,000 and were able to meet the new requirements and grow their business.

Title: Using **ISO 9000:2000** to Improve **Quality**, Cost and Productivity.

ISO 9000:2000 is a series of International Quality Standards that are today being used by companies and organizations around the world to provide a basis for a quality system as a way of assuring the customer that processes and procedures have been implemented that will help to assure the quality levels of products and services rendered.

Born-on-Date: 20 July 2004

Background: The ISO 9000:2000 series of quality standards are an outgrowth of efforts by the European Committee for Standardization and the International Organization for Standardization (ISO). The formation of the European Community in 1965 and then the European Union in 1993 were major factors leading to the harmonization of the nineteen different quality standards into one. Originally released in 1987, the standards have been updated to take advantage of advanced quality concepts being employed by world-class organizations. The DoD in an attempt to foster the use of commercial standards adopted ISO9001:2000 (the most far-reaching of ISO quality standards) in lieu of MIL-Q-9858A on 18 November 1996.

Discussion: The intent of the ISO 9001:2000 series is to provide consistent customer satisfaction and improved competitiveness. ISO 9001:2000 quality standard consists of five sections:

- Section 4: Quality Management System

- Section 5: Management Responsibility
- Section 6: Resource Management
- Section 7: Product Realization
- Section 8: Measurement, Analysis and Improvement

ISO 9001:2000 defines the requirements for quality management systems and is used to demonstrate an organization's capability to provide products that meet customer and applicable regulatory requirements.

ISO 9001:2000 Sections:

Section 4: Quality Management System includes having an organization to ensure that processes have been established, how they interact with each other, what resources are required to provide the product and how the processes are measured and improved. Then a system for the control of the documentation has to be established along with the Quality Manual and controls for looking after records.

Section 5: Management Responsibility at the highest levels must be cognizant of the quality requirements and it is their responsibility to set policies, objectives and review the system, as well as communicate the effectiveness of the quality system within the organization.

Section 6: Resource Management covers the people, facilities and equipment needed to ensure that the customer receives a quality product.

Section 7: Product Realization covers the processes that are required to provide the product or service. These processes cover such activities as capturing the requirements from the customer, the design and development of the product(s), the purchasing of materials and services, and the delivery of the products or services.

Section 8: Measurement, Analysis and Improvement includes the measurement of products (at a characteristic level), measuring customer satisfaction, ensuring that the management systems operate as designed, and measure and foster continual improvement in products and processes.

Results: KAPCO is one of thousands of companies that embraced ISO 9000 in order to meet growing customer demands for a supplier to have a recognized quality system. Many DoD prime contractors now demand ISO certification just to meet the minimum supplier quality requirements.

Benefits: The application of ISO 9001:2000 to a weapon system program in production can result in significant reductions in cost and cycle times, and major improvements in quality, responsiveness and performance.

Application to other programs:



This practice is applicable on any program in which a new high-technology product is being designed, developed, produced and/or maintained.

Key words: Quality Management

(keywords are used to support improved search capabilities in the information repository):

Additional Resources: http://acc.dau.mil/simplify/ev_en.php click on the Production, Quality and Manufacturing Special Interest Area for additional information
<http://www.iso.org/iso/en/iso9000-14000/iso9000/iso9000index.html>
<http://www.isoeasy.org/> definitions and frequently asked questions
http://www.intersolinc.com/resources/iso_overview.htm#Overview
<http://www.isoeasy.org/whatr2000.htm>

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