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ISO/TS16949:2009
The Automotive Management System

Background

ISO/TS 16949:2009 is an ISO Technical Specification. The International Automotive Task Force (IATF), which consists of an international group of vehicle manufacturers, plus national trade associations, wrote ISO/TS 16949:2009 in conjunction with the International Organization for Standardization (ISO). This specification aligns existing American (QS-9000), German (VDA6.1), French (EAQF) and Italian (AVSQ) automotive quality systems standards within the global automotive industry.

Together with ISO 9001:2008, ISO/TS 16949:2009 specifies the quality system requirements for the design/development; production, installation and servicing of automotive related products. In addition, there are customer specific requirements that are required by individual subscribing vehicle manufacturers.

ISO/TS 16949:2009 does not replace the existing quality system requirements. However, along with customer specific requirements, ISO/TS 16949:2009 has been accepted as an equivalent to QS-9000, VDA6.1, AVSQ, and EAQF. The standard will eliminate the need for multiple certifications. Most automotive customers have published customer specific supplements to the standard, which are a binding extension of the specification and are subject to audits.

Please visit the IATF website at www.iatfglobaloversight.org for the latest customer specific requirements.

Development of ISO/TS 16949:2009

In the USA, Ford, General Motors and Chrysler developed QS-9000, which harmonized their quality system requirements for their suppliers into one document. QS-9000, was based upon then the International Standard ISO9001: 1994, and is supported by a series of support manuals, focusing on the key automotive tools, namely Measurement System Analysis (MSA), Failure Mode and Effects Analysis (FMEA), Advanced Product Quality Planning (APQP), and Statistical Process Control (SPC). In France, Germany and Italy similar quality system requirement documents EAQF, VDA6.1, AVSQ were developed

This led to automotive suppliers servicing multiple vehicle manufacturers and still having to comply with differing Quality System Requirements, all with the same intent of improving product quality.

In December 2000, as a result of the five yearly review process, the core standard ISO9001: 1994 was reissued as ISO9001:2000. Instead of the complex twenty clause structure of ISO9001: 1994, ISO9001:2000 is structured around five main sections, namely, Quality Management System, Management Responsibility, Resource Management, Product Realization and Measurement, Analysis and Improvement. The revised standard focuses on "The process approach" to quality management. As a result of a number of changes and improvements, ISO/TS 16949:2002 was issued in March 2002. The current 2009 revision of the standard took place to incorporate the ISO 9001:2008 revision.

Organizational Benefits of ISO/TS 16949:2009

- One quality system to meet multiple customer quality requirements
- Documented operational and quality system
- Ability for increased business
- Improved utilization of time and materials
- Improved efficiency and profitability
- Increased customer satisfaction
- Quality improvement and timely delivery
- Improved control of quality and processes
- Improved performance from suppliers
- Responsibilities of personnel clearly defined
- Documented system provides useful reference
- Lower reject rates, rework, and warranty costs

Key Requirements of ISO/TS 16949:2009

ISO/TS16949:2009 focuses on the effective linkages between the company's business plan, quality policy, quality objectives and measures, planning on how objectives can be achieved, and deploying objectives throughout the organization. The standard and its series of support manuals can be purchased through the Society of Automotive Engineers International at **www.sae.org**.

Some of the key additional requirements include the need for:

- Top management involvement including establishing and implementing a business plan, including linkages to clearly defined measurable quality objectives.
- Clear definition of responsibilities, including shift activities and authority to stop production to correct quality problems.
- Top management review of the performance of the quality system, including reporting and evaluation of the cost of poor quality.
- Human Resource management including processes for defining competence requirements, providing training (including on the job training for employed and temporary and agency personnel), and verifying effectiveness of actions taken.
- A process to achieve quality objectives and continual improvement, creating an environment to promote innovation.
- A process to measure the extent to which personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of the quality objectives.
- Focus on product and process design.
- Use of automotive core tools (Statistical Process Control (SPC), Failure Mode Effect Analysis (FMEA), and Measurement System Analysis (MSA).
- Development of suppliers using ISO/TS16949:2009.
- Controlling production processes by use of control plans including provision of adequate work instructions.
- Ensuring effective control of internal and external laboratories.
- A process for measurement of customer perception and satisfaction.