
**Quality systems — Automotive suppliers —
Particular requirements for the application
of ISO 9001:1994**

*Systèmes qualité — Fournisseurs de l'automobile — Exigences
particulières pour l'application de l'ISO 9001:1994*

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In other circumstances, particularly when there is an urgent market requirement for such documents, a technical committee may decide to publish other types of normative document:

- an ISO Publicly Available Specification (ISO/PAS) represents an agreement between technical experts in an ISO working group and is accepted for publication if it is approved by 50 % of the members of the parent committee casting a vote;
- an ISO Technical Specification (ISO/TS) represents an agreement between the members of a technical committee and is accepted for publication if it is approved by 2/3 of the members of the committee casting a vote.

An ISO/PAS or ISO/TS is reviewed every three years with a view to deciding whether it can be transformed into an International Standard.

ISO/TS 16949 was prepared by the International Automotive Task Force (IATF) and representatives from ISO/TC 176, *Quality management and quality assurance*, and its subcommittees.

Boxed text in copyright notice, clause 4 and annex A is original ISO 9001:1994 text. The sector-specific supplemental requirements are outside the boxes.

In this Technical Specification, the word "shall" indicates requirements. Paragraphs marked "NOTE" are for guidance in understanding or clarifying the associated requirement. The word "should" appearing in a NOTE is for guidance only.

Where the term "such as" is used, any suggestions given are for guidance only.

ISO/TS 16949 has been issued for provisional application in the automotive sector so that information and experience in its use may be gathered.

Remarks for certification

To obtain recognition of certification to this Technical Specification by the customer members of the IATF, a common global certification scheme has been developed and must be followed (see bibliography [7]). Customer-specific requirements supplemental to this Technical Specification, if any, shall be included in the audit in order to obtain customer recognition of such certification.

Details can be obtained from the organizations who support the International Automotive Task Force cited below.

NOTE All participating IATF OEMs and suppliers have customer-specific requirements in addition to this Technical Specification.

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Introduction

The goal of this Technical Specification is the development of fundamental quality systems that provide for continuous improvement, emphasizing defect prevention and the reduction of variation and waste in the supply chain. This Technical Specification defines the fundamental quality system requirements of the subscribing companies. It is recognized that there may be company-specific, division-specific, commodity-specific, and/or part-specific requirements in addition to those given in Figure 1.

This Technical Specification aligns existing automotive quality system requirements within the global automotive industry and avoids multiple certification audits.

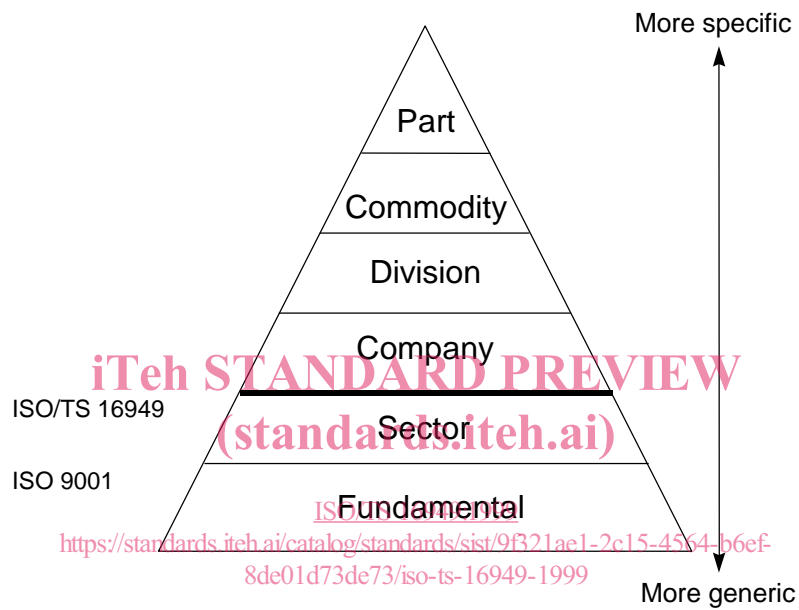
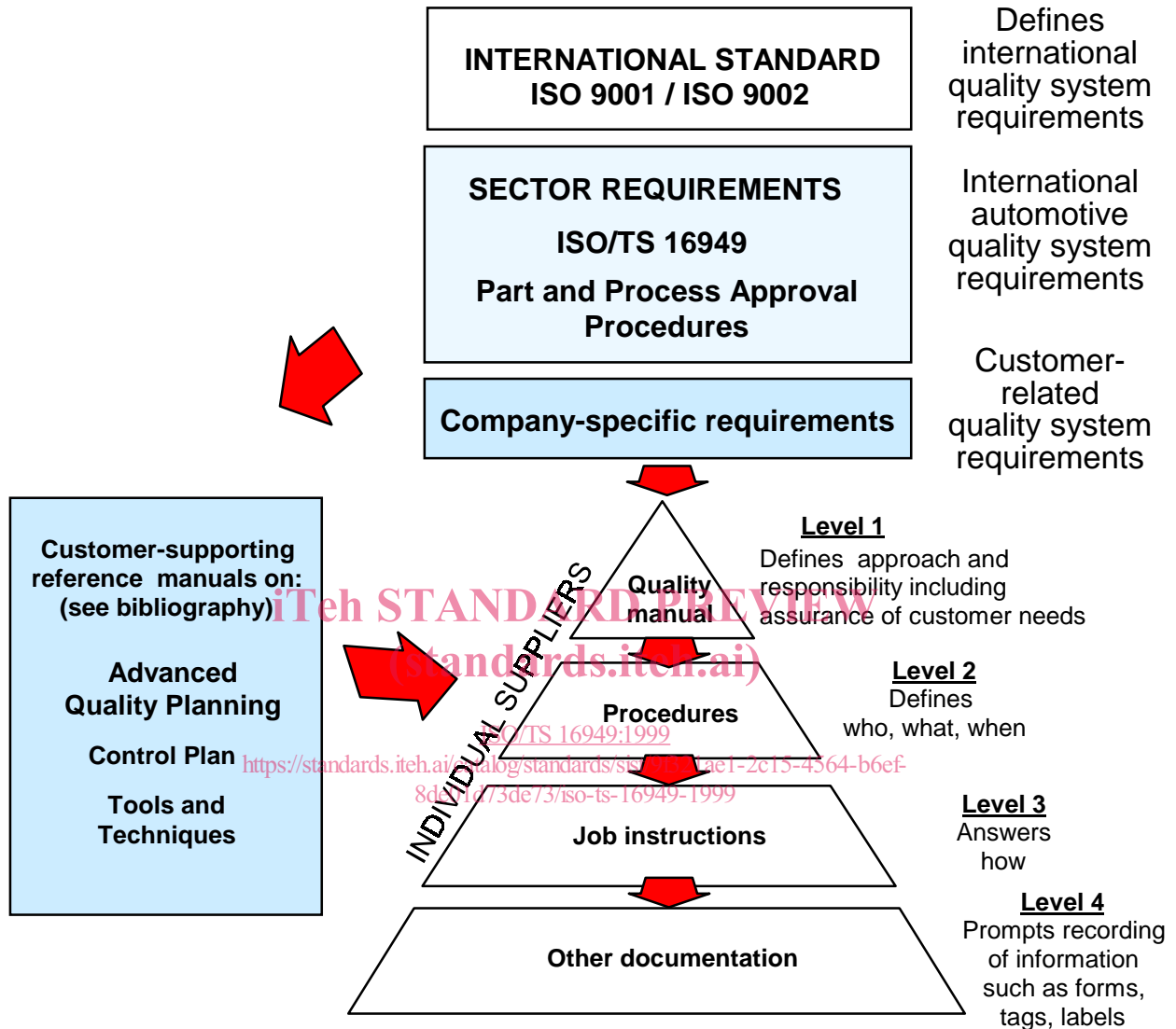


Figure 1 — Quality related requirements

Figure 2 demonstrates the progression of quality system documentation.



NOTE Once recorded, level 4 items may become a quality record (see 4.16).

Figure 2 — Quality System Documentation Progression

In this Technical Specification, quality planning activities of all pre-launch phases have been integrated under the new heading: "Product realization".

For suppliers with product design responsibility, product realization also includes product design (see 4.4).

Product realization in the context of quality planning is discussed in 4.2.4. The structure is outlined below:

- 4.2.3 Quality planning
 - 4.2.3.1 Quality planning – ISO 9001:1994
 - 4.2.3.2 Quality plan requirements
- 4.2.4 Product realization
 - 4.2.4.1 General
 - 4.2.4.2 Measurements
 - 4.2.4.3 Review cycle
 - 4.2.4.4 Multidisciplinary approach
 - 4.2.4.5 Tools and techniques
 - 4.2.4.6 Computer-aided design
 - 4.2.4.7 Special characteristics
 - 4.2.4.8 Feasibility review
 - 4.2.4.9 Management of process design
 - 4.2.4.9.1 General
 - 4.2.4.9.2 Process design input
 - 4.2.4.9.3 Process design output
 - 4.2.4.9.4 Process verification
 - 4.2.4.10 Control plan
 - 4.2.4.11 Product approval process

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Quality systems — Automotive suppliers — Particular requirements for the application of ISO 9001:1994

1 Scope

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2 Normative references

[ISO/TS 16949:1999](https://www.iso.org/standard/52411.html)

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The following normative documents contain provisions which, through reference in this text, constitute provisions of this Technical Specification. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this Technical Specification are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 8402:1994, *Quality management and quality assurance — Vocabulary*.

ISO 9001:1994, *Quality systems — Model for quality assurance in design, development, production, installation and servicing*.

ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*¹.

3 Terms and definitions

For the purposes of this Technical Specification the terms and definitions given in ISO 8402:1994 and in annex A apply. However where there are terms for which the wording of the definition differs in ISO 8402:1994, the definitions in annex A apply.

¹ Revision of ISO/IEC Guide 25:1990.

4 Quality system requirements

4.1 Management responsibility

4.1.1 Quality policy

4.1.1.1 Quality policy – ISO 9001:1994

The supplier's management with executive responsibility shall define and document its policy for quality, including objectives for quality and its commitment to quality. The quality policy shall be relevant to the supplier's organizational goals and the expectations and needs of its customers. The supplier shall ensure that this policy is understood, implemented and maintained at all levels of the organization.

4.1.1.2 Objectives

The supplier shall define goals, objectives and measurements to deploy the quality policy. Objectives for achieving quality shall be included in the business plan.

NOTE The goals and objectives should address customer expectations and be achievable within a defined time period.

4.1.1.3 Customer satisfaction

The supplier shall have a documented process for determining customer satisfaction, including frequency of determination, and how objectivity and validity are assured. Indicators to monitor trends of customer satisfaction and dissatisfaction shall be documented and supported by objective information.

NOTE Consideration should be given to both internal and external customers.

4.1.1.4 Continuous improvement

Continuous improvement in quality, service, cost, and technology shall be provided for in the Quality Policy.

The supplier shall identify opportunities for quality and productivity improvement and implement appropriate improvement projects.

The supplier shall use appropriate continuous improvement measures and methodologies (see 4.2.7).

NOTE 1 The following list shows examples of possible techniques which might be used. There may be many other methods which meet specific supplier needs more appropriately:

- control charts (variables, attributes, CUSUM),
- design of experiments (DOE),
- theory of constraints,
- overall equipment effectiveness,
- parts per million (PPM) analysis to achieve zero defects,
- value analysis,
- benchmarking,
- analysis of motion/ergonomics,
- mistake-proofing.

NOTE 2 Guidelines for quality improvement are given in ISO 9004-4.

4.1.2 Organization

4.1.2.1 Responsibility and authority

4.1.2.1.1 Responsibility and authority – ISO 9001:1994

The responsibility, authority and the interrelation of personnel who manage, perform and verify work affecting quality shall be defined and documented, particularly for personnel who need the organizational freedom and authority to:

- a) initiate action to prevent the occurrence of any nonconformities relating to the product, process and quality system;
- b) identify and record any problems relating to the product, process and quality system;
- c) initiate, recommend or provide solutions through designated channels;
- d) verify the implementation of solutions;
- e) control further processing, delivery or installation of nonconforming product until the deficiency or unsatisfactory condition has been corrected.

4.1.2.1.2 Customer representative

The supplier shall assign responsibility to appropriate individuals to represent the needs of the customer in internal functions in addressing quality requirements, such as selection of special characteristics, setting quality objectives, training, corrective and preventive actions, product design and development.

4.1.2.1.3 Quality responsibility

Management with responsibility and authority for corrective action shall be promptly informed of products or processes which become noncompliant with specified requirements.

Personnel responsible for quality shall have the authority to stop production to correct quality problems.

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4.1.2.2 Resources

4.1.2.2.1 Resources – ISO 9001:1994

The supplier shall identify resource requirements and provide adequate resources, including the assignment of trained personnel (see 4.18), for management, performance of work and verification activities including internal quality audits.

NOTE Subclause 4.18 in ISO 9001:1994 is 4.18.1 in this Technical Specification.

4.1.2.2.2 Shift resources

Especially concerning the production process, all the shifts shall be staffed with personnel in charge of, or delegated responsibility for quality.

4.1.2.3 Management representative

The supplier's management with executive responsibility shall appoint a member of the supplier's own management who, irrespective of other responsibilities, shall have defined authority for

- a) ensuring that a quality system is established, implemented and maintained in accordance with this International Standard, and
- b) reporting on the performance of the quality system to the supplier's management for review and as a basis for improvement of the quality system.

NOTE The responsibility of a management representative may also include liaison with external parties on matters relating to the supplier's quality system.