
**Technical product documentation —
Handling of computer-based technical
information —**

Part 5:

Documentation in the conceptual design stage
of the development phase

*Documentation technique de produits — Gestion des informations
techniques assistée par ordinateur —*

*Partie 5: Documentation au stade initial de la conception, dans la phase de
développement*



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.

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.

International Standard ISO 11441-5 was prepared by Technical Committee ISO/TC 10, *Technical drawings, product definition and related documentation*, Subcommittee SC 1, *Basic conventions*.

ISO 11442 consists of the following parts, under the general title *Technical product documentation — Handling of computer-based technical information*:

- Part 1: Security requirements
- Part 2: Original documentation
- Part 3: Phases in the product design process
- Part 4: Document management and retrieval systems
- Part 5: Documentation in the conceptual design stage of the development phase
- Part 6: Rules for revision
- Part 7: Structuring CAD files from an administrative point of view
- Part 8: Data fields for title blocks, item lists and revision blocks
- Part 9: Terminology

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ISO 11442-5:1999

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Part 5:

Documentation in the conceptual design stage of the development phase

1 Scope

This part of ISO 11442 gives guidelines for establishing internal company rules for documentation during the conceptual design stage. These rules apply to manual as well as computer-based design work.

2 Normative references

ISO 11442-5:1999

The following normative documents contain provisions which, through references in this text, constitute provisions of this part of ISO 11442. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 11442 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 11442-3:1993, *Technical product documentation — Handling of computer-based technical information — Part 3: Phases in the product design process*.

ISO 11442-9:—¹⁾, *Technical product documentation — Handling of computer-based technical information — Part 9: Terminology*.

3 Terms and definitions

For the purposes of this part of ISO 11442, the terms and definitions given in ISO 11442-9 apply.

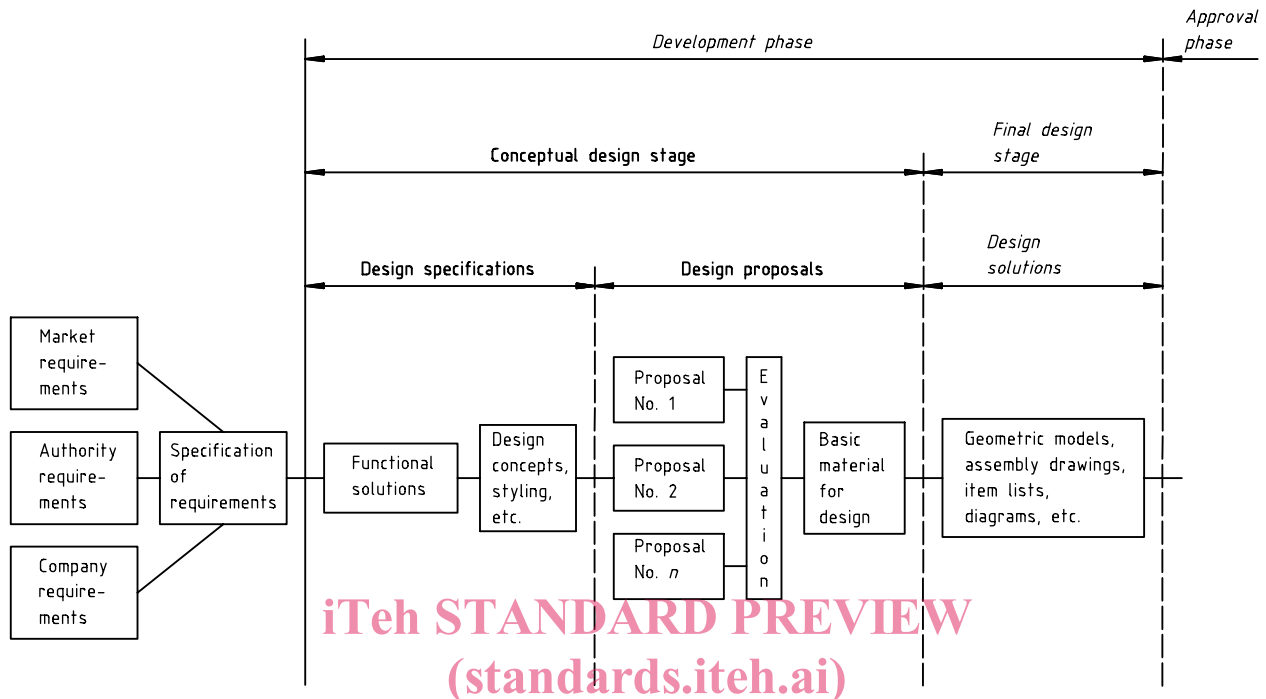
4 General

The development phase (see ISO 11442-3) is the initial part of the product development process which results in technical documents for product definitions. See Figure 1.

The development phase consists of the conceptual design stage and the final design stage.

¹⁾ To be published.

Since the solutions made in the conceptual design stage are the preconditions for the following activities, they should be documented. The documentation in the conceptual design stage is normally simplified compared with the documentation in the following stages, where it is based on standards which render it unambiguous and rational. It is therefore preferable to use selected parts from these standards during the conceptual design stage.



ISO 11442-5:1999
Figure 1
<https://standards.itech.ai/catalog/standards/sist/8c3686d1-d961-4b94-8623-e5c6682d3fd7/iso-11442-5-1999>

5 Documentation

5.1 General

The documentation in the conceptual design stage can be divided into:

- design specifications;
- design proposals.

The first task is to establish a specification based on the compilation and evaluation of the requirements from the market, authorities and the company itself.

Market-related requirements are for example the requirements for function, environments, service and price. The documentation of the market-related requirements shall ensure that the right product is produced at the right time.

Authority-related requirements are for example requirements for approval, safety, or recycling. The documentation of the authority-related requirements shall ensure that the product can be approved.

Company-related requirements are for example the company's requirements for strategy, design, production processes and costs. The documentation of the company-related requirements shall ensure that the product complies with the standards of the company, and be produced in a such a way that known and/or accepted manufacturing processes or methods are taken into account.

5.2 Design specifications

Based on the specification of requirements, design specifications serve as a basis for further development. They may indicate possible functional solutions and/or shape representations, which will be the basis for the following proposals:

- Functional solutions

Function and relationship between parts are described as principle solutions, normally in the form of text and diagrams.

- Shape representations

Physical form is normally presented as conceptual drawings or geometric models such as styling models.

5.3 Design proposals

Design specifications are the basis for one or more design proposals to be evaluated. The result of the evaluation constitutes the basic material for design.

6 Handling of documents

During the development phase, documents are under preparation and the formal handling of documents does not necessarily need to follow the procedures which apply to the final product documentation. The extent of the document control shall be decided within the relevant company, project, etc.

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