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Guidelines for implementation of statistical process control (SPC) —

Part 1: Elements of SPC

*Lignes directrices pour la mise en œuvre de la maîtrise statistique des
processus (MSP) —*

Partie 1: Éléments de MSP



Reference number
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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.

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.

Attention is drawn to the possibility that some of the elements of this part of ISO 11462 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 11462-1 was prepared by Technical Committee ISO/TC 69, *Applications of statistical methods*, Subcommittee SC 4, *Applications of statistical methods in process management*.

ISO 11462 consists of the following parts, under the general title *Guidelines for implementation of statistical process control (SPC)*:

— *Part 1: Elements of SPC*

A catalogue of tools and techniques will be the future subject of part 2 to ISO 11462.

Annex A forms a normative part of this part of ISO 11462.

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Introduction

ISO 11462 provides guidelines for the implementation of a statistical process control (SPC) system. These guidelines are aimed primarily at increasing production efficiency and inherent capability, and reducing interval and cost.

This part of ISO 11462 provides *elements* to guide an organization in planning, developing, executing, and/or evaluating a statistical process control system. By implementing those elements deemed applicable and appropriate by customer and supplier, an organization may satisfy a requirement to adopt a comprehensive and effective SPC system. By also deploying a quality system with the aim of ensuring that products and services meet customer requirements (such as the system defined by ISO 9001), an organization can improve the infrastructure so as to help hold the gains from its SPC system.

This part of ISO 11462 extends the definition of process control to integrate the traditional definitions of statistical process control, algorithmic process control, and model-based control methods. These are different approaches with the same purpose of reducing variation in both products and processes.

This part of ISO 11462 also extends the definition and usage of the term *parameter* to apply to a process parameter or a product parameter; and to recognize that a product parameter can be either an in-process product parameter or a final-product parameter. Under specified conditions of measurement, a product parameter can be equivalent to a product characteristic.

Some considerations given in the formulations of ISO 11462 are the following:

- a) Elements of part 1 of ISO 11462 guide an organization in how to implement an SPC system. Specific tools and techniques that experience has shown useful in applying these elements within processes will be listed in part 2 of ISO 11462.
- b) Users of ISO 11462 should be aware that the use of "should" throughout both parts of ISO 11462 indicates that
 - 1) among several possibilities, one or more are recommended as being particularly suitable and effective, without mentioning or excluding others;
 - 2) a certain course of action is preferred but not necessarily required for a process in order to gain the economic control of production.

This choice of language does not indicate requirements which are to be strictly followed in order to conform to this International Standard and from which no deviation is permitted.