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Sampling procedures for inspection by attributes — Introduction to the ISO 2859 series of standards for sampling for inspection by attributes

Règles d'échantillonnage pour les contrôles par attributs — Introduction au système d'échantillonnage pour les contrôles par attributs de l'ISO 2859

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 69, *Applications of statistical methods*, Subcommittee SC 5, *Acceptance sampling*.

This first edition of ISO 28590 cancels and replaces ISO 2859-10:2006, of which it constitutes a minor revision to change the reference number from 2859-10 to 28590.

With the view to achieve a more consistent portfolio, TC 69/SC 5 has simultaneously renumbered the following standards, by means of minor revisions:

Old reference	New reference	Title
ISO 2859-10:2006	ISO 28590:2017	Sampling procedures for inspection by attributes — Introduction to the ISO 2859 series of standards for sampling for inspection by attributes
ISO 8422:2006	ISO 28591:2017	Sequential sampling plans for inspection by attributes
ISO 28801:2011	ISO 28592:2017	Double sampling plans by attributes with minimal sample sizes, indexed by producer's risk quality (PRQ) and consumer's risk quality (CRQ)
ISO 18414:2006	ISO 28593:2017	Acceptance sampling procedures by attributes — Accept-zero sampling system based on credit principle for controlling outgoing quality
ISO 21247:2005	ISO 28594:2017	Combined accept-zero sampling systems and process control procedures for product acceptance
ISO 14560:2004	ISO 28597:2017	Acceptance sampling procedures by attributes — Specified quality levels in nonconforming items per million
ISO 13448-1:2005	ISO 28598-1:2017	Acceptance sampling procedures based on the allocation of priorities principle (APP) — Part 1: Guidelines for the APP approach
ISO 13448-2:2004	ISO 28598-2:2017	Acceptance sampling procedures based on the allocation of priorities principle (APP) — Part 2: Coordinated single sampling plans for acceptance sampling by attributes

Cross references between the above listed documents have been corrected in the minor revisions.

A list of all documents in the new ISO 28590 - ISO 28599 series of International Standards can be found on the ISO website.

Introduction

This general introduction to the ISO 2859 acceptance sampling series describes the attribute sampling schemes and plans set forth in ISO 2859-1, ISO 2859-2, ISO 2859-3, ISO 2859-4 and ISO 2859-5. This introduction treats the subject of sampling inspection by attributes in a general way, introducing the essential operating procedures and the ways in which the systems were designed to be used. To understand fully the concepts and their applications, it is necessary to consult ISO 2859-1, ISO 2859-2, ISO 2859-3, ISO 2859-4, ISO 2859-5 and ISO/TR 8550-1.

The individual parts of this series of international standards extend this introductory explanation to more specific applications that are appropriate for the particular standard.

It is emphasized that ISO 2859-1 provides sampling schemes indexed by acceptance quality limit (AQL). The quality measure used can be percent nonconforming or the number of nonconformities per 100 items. ISO 2859-1 was developed primarily for the inspection of a continuing series of lots all originating from the same production or servicing process. In this situation, adequate protection (or the maximum process average percent nonconforming) is maintained by use of the switching rule from normal to tightened inspection should a certain (limiting) number of unacceptable lots be found in a short series of successive lots.

ISO 2859-2 provides sampling plans applicable for use when individual or isolated lots are to be sampled. These sampling plans are in many instances identical to those in ISO 2859-1. The tables of sampling plans in ISO 2859-2 include information regarding the quality level required to assure a high probability of lot acceptance.

ISO 2859-3 provides skip-lot procedures for use when the process quality is markedly superior to the AQL for a defined long period of delivery or observation. When the quality level is in this state of excellence, it is sometimes more economical to use ISO 2859-3 than to use the reduced sampling procedure of ISO 2859-1. Like ISO 2859-1, ISO 2859-3 is applicable to a continuing series of lots from a single source.

ISO 2859-4 provides a procedure that may be used to verify a quality level that has been declared for some entity. This function is not appropriate for the other parts of the series. The main reason for this is that those procedures have been indexed in terms of quality levels that are relevant solely for the purpose of acceptance sampling, and the various risks have been balanced appropriately. The procedures in ISO 2859-4 have been developed in response to the need for sampling procedures suitable for formal, systematic inspections such as reviews or audits.

ISO 2859-5 provides a method of establishing sequential sampling plans of discriminatory power essentially equivalent to that of corresponding plans of ISO 2859-1.

A complementary system of sampling plans for inspection by variables, also indexed by AQL, is provided by the ISO 3951 series, *Sampling procedures for inspection by variables*.