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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 2828.1-2012

Replacing GB/T 2828.1-2003

**Sampling procedures for inspection by attributes - Part 1:
Sampling schemes indexed by acceptance quality limit (AQL)
for lot-by-lot inspection**

计数抽样检验程序 第1部分：按接收质量限(AQL)检索的逐批检验抽样计划

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Foreword

GB/T 2828 "Counting Sampling Inspection Procedure" is divided into the following parts.

- Part 1. Batch-by-batch sampling plan (ISO 2859-1.1999, IDT) retrieved by acceptance quality limit (AQL)
- Part 2. Isolated batch inspection sampling plan by limit mass (LQ) (ISO 2859-2.1985, NEQ)
- Part 3. Jump batch sampling procedure (ISO 2859-3.2005, IDT)
- Part 4. Procedures for claiming quality levels (ISO 2859-4.2002, MOD)
- Part 5. Batch-by-batch sequential sampling inspection system based on reception quality limit (AQL) (ISO 2859-5.2005, IDT)
- Part 10. GB/T 2828 counting sampling test series of standard guidelines (ISO 2859-10.2006, MOD)
- Part 11. Small overall claim quality assessment procedures This part is the first part of GB/T 2828. This part is drafted in accordance with the rules given in GB/T 1.1-2009. This part replaces GB/T 2828.1-2003 "Counting sampling inspection procedures Part 1. Search by the acceptance quality limit (AQL) Batch inspection sampling plan. Compared with GB/T 2828.1-2003, the changes in technical content mainly include:
 - Terms and definitions, symbols have been modified according to GB/T 3358.2-2009. For example, change the "sampling characteristic curve" to "operational special "The curve"; the interpretation of "defects" is defined by the term "defects" when evaluating the quality characteristics of a product or service by custom. "defects" can be used when evaluating the quality characteristics of a product or service from a usage perspective rather than from a regulatory perspective. This term";
 - Added a graph of $A_c=4$ in the average sample size curve for primary, secondary and multiple sampling in Table 9;
 - Modified some of the textual descriptions. This part is equivalent to the international

standard ISO 2859-1:1999 "Counting sampling inspection procedures Part 1. According to the acceptance quality limit (AQL) The batch-by-batch sampling plan for the cable and the ISO 2859-1:1999 technical amendment issued by 2001-03-01. At the same time retaining GB/T 2828.1- The following corrections to ISO 2859-1:1999 in 2003.

--- Delete the arrow in the curve of $Ac=12$ in Table 9;

--- In the curve of $Ac = 7$ in Table 9, the arrow position moved from 3 to 3.15;

--- In the curve of $Ac=27$, $Ac=30$, $Ac=41$, $Ac=44$ in Table 9, the abscissa is changed to "nx100 unit product mismatch Number of grids/100". Please note that some of the contents of this document may involve patents. The issuing organization of this document is not responsible for identifying these patents. This part was proposed by the China National Institute of Standardization. This part is under the jurisdiction of the National Statistical Methods and Applications Standardization Technical Committee (SAC/TC21). This section was drafted by: China National Institute of Standardization, Chinese People's Liberation Army Ordnance Engineering College, Chinese Academy of Sciences Mathematics and Systems Science Research Institute, Xiamen Huajian Testing Technology Co., Ltd. The main drafters of this section. Yu Zhenfan, Zhang Yuzhu, Ding Wenxing, Xiao Hui, Zhang Fan, Feng Shizhen, Ma Yilin, Liu Wen, Wan Feng. This section replaces the standard previous version release.

1 Scope

GB/T 2828.1-2012 specifies a system of sampling inspection by attributes indexed by the acceptance quality limit, the AQL, for the inspection of a continuing series of lots. Its declared purpose is to induce the supplier, by the economic and psychological pressure of having lots rejected, to keep the process average below the specified AQL, while giving the consumer an upper bound on the probability of accepting a bad lot. It applies to the inspection of finished products, of components and raw materials, of operations, of work in progress, of stock, of maintenance operations, of data and records and of administrative procedures. The document is an identical adoption of ISO 2859-1:1999 together with its 2001 technical corrigendum, and it replaces GB/T 2828.1-2003, from which it differs in the terminology aligned to GB/T 3358.2-2009, in an added $Ac=4$ curve, and in editorial changes. Most of its eighty-two pages are tables: the sample size code letters, the single, double and multiple sampling plans for normal, tightened and reduced inspection, the producer and consumer risks, the average outgoing quality limits and the operating characteristic curves. It is the document a purchase contract points at when it says how many pieces will be checked and how many defects are allowed, which is why it is cited across the whole manufacturing corpus.

1.1 This section specifies a counting sampling inspection system. This section uses the Receive Quality Limit (AQL) to retrieve. The purpose of this section is to induce the supplier to economically and psychologically exert pressure by not accepting the batch, and to

promote the process to average the quality of water. The flat value remains below the specified reception quality limit while providing an upper limit to the probability that the consumer will receive the inferior batch. Specified in this section The sampling plan can be used for (but not limited to) the following tests.

- Final product;
- Parts and raw materials;
- work in progress;
- Maintenance operation;
- Data or record;
- Management procedures.

1.2 The sampling plan in this section is primarily applicable to continuous series of batches. The series of consecutive series batches is long enough to allow the use of transfer rules (see 9.3). These rules are.

- a) In the event of deterioration in quality, in order to provide protection to the user, transfer to a tightened test or a suspended sampling test;
- b) If the quality has been relatively good, in order to reduce the inspection cost, with the consent of the responsible department, according to the transfer rules, it can be transferred to the relaxation test. The sampling plan in this section can also be used for the inspection of isolated batches, but in this case, users are strongly advised to carefully analyze the sampling plan. The operating characteristic curve (see 12.6) determines a sampling plan that gives the desired protection; the user can also refer to GB/T 2828.2- The sampling plan for the search by limit mass (LQ) given in.2008.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only the dated version is appropriate for this document. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 2828.2-2008 - Test procedures for counting sampling - Part 2. s Case (ISO 2859-2.1985, NEQ)

GB/T 2828.3-2008 Procedures for the enumeration of samplings - Part 3. Procedures for the sampling of jumps (ISO 2859-3.2005, IDT)

GB/T 3358.1-2009 Statistical vocabulary and symbols Part 1. General statistical terms and terms used for probability (ISO 3534-1.2006, IDT)

GB/T 3358.2-2009 Statistical vocabulary and symbols - Part 2. Application statistics (

ISO 3534-2:2006, IDT) 3 terms and definitions, symbols

3.1 Terms and definitions The following terms and definitions as defined in GB/T 3358.1-2009 and

GB/T 3358.2-2009 apply to this document.

3.1.1 Inspection inspection Measure, inspect, test, or measure one or more characteristics of a product or service to determine whether the characteristics of the product or service are acceptable, and Activities that are compared to the required requirements.

3.1.2 Initial inspection original inspection The first inspection of the batch in accordance with the provisions of this section.

Note. The initial inspection must be distinguished from the inspection that was previously rejected and submitted to the batch again.

3.1.3 Count test inspection by attributes Regarding a specified one or a group of requirements, or only dividing the unit product into qualified or unqualified, or only calculating the unit product The test of the number of cells.

Note. The counting test includes both the inspection of the product's eligibility and the inspection of the number of unqualified products per 100 units.

3.1.4 Unit product item A thing that can be described and considered separately. E.g.

3.2 Symbols and abbreviations

---received number AQL

--- Receiving quality limit (expressed as percentage of non-conforming product or number of unqualified products per hundred units) AOQ

--- average quality of detection (expressed as percentage of non-conforming product or number of unqualified products per hundred units) AOQL

---average detection quality upper limit (expressed as percentage of non-conforming product or number of unqualified products per hundred units) ASN

--- average sample size CRQ

--- consumer risk quality (expressed as percentage of non-conforming product or number of unqualified products per hundred units) d

--- the number of unqualified items or unsatisfactory found in the samples taken from the batch D

--- the number of unqualified products or the number of unqualified items in the whole or batch LQ