

ICS 21.020
CCS K 04



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

GB/T 9414.2-2012

Replacing GB/T 9414.2-1988; GB/T 9414.4-1988

**Maintainability of equipment -- Part 2: Maintainability
requirements and studies during the design and development
phase**

维修性 第2部分：设计和开发阶段维修性要求与研究

(English Translation)

Issued on: December 31, 2012

Implemented on: June 1, 2013

Issued by: Standardization Administration of China

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Foreword

GB/T 9414 "maintainability" or has plans to release the following sections.

- Part 1. Application guide;
- Part 2. design and development stage of the maintenance requirements and research;
- Part 3. Validation and data collection, analysis and representation;
- Part 4. Service and maintenance of security program guidelines;
- Part 5. diagnostic tests.

This section GB/T 29414 Part of.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This Part replaces GB/T 9414.2-1988 "Guide on maintainability of equipment Part II. specification and contract maintenance requirements" and GB/T 9414.4-1988 "Guide on maintainability of equipment Part V. Research design phase of repair." This portion of the GB/T 9414.2-1988 and GB/T 9414.4-1988 compared to the main changes are as follows.

- Standard name "Guide on maintainability of equipment" unified to "repair" of;
- Standard structure using IEC 60706-2:2006;
- Additional three chapters. Chapter 4, the general procedure, Chapter 5 Servicing principle, Chapter 6 life cycle maintenance work;
- In other chapters also have relevant content revisions, such as increasing the fault tree analysis (see 8.4.8) and RCM analysis (see 8.4.9);
- Added two appendices. A maintainability allocation Appendices Appendix C failure rate is not constant distribution system reliability and maintenance side Needle selection, for example.

This section uses the translation method is equivalent to using IEC 60706-2:2006 "on maintainability of equipment - Part 2. Design and development phase to the maintenance of Seek and research. " Consistency correspondence between this part of international documents and normative references of our files are as follows.

- GB/T 2900.13-2008 Electrotechnical terminology credibility and quality of service (IEC 60050 (191).1990, IDT);

--- GB/T 7826-2012 Technical Systems Reliability Analysis Failure Mode and Effects Analysis (FMEA) procedure (IEC 60812.

2006, IDT);

--- GB/T 9414.1-2012 Maintenance - Part 1. Application guide (IEC 60300-3-10:2001, IDT);

Part --- GB/T 9414.3-2012 3 Maintainability. Maintainability of test data collection, analysis and representation (IEC 60706-3:2006, IDT);

--- GB/T 9414.7-2000 Guide on maintainability of equipment Part 4. Diagnostic tests (idt IEC 60706-5:1994).

This part of the National Electrotechnical Standardization Technical Committee Electronic Product Reliability and Maintainability (SAC/TC24) centralized.

This section drafted by. Ministry of Information Industry and Posts and Telecommunications Industry Standardization Institute, Beijing University of Posts and Telecommunications.

Introduction

Maintainability refers to the product during use, the availability of repair and maintenance support features. It is necessary to repair and open design of a product the part of the development process to consider, so the maintenance requirements as the initial part of the specification is very important.

GB/T 9414 standard is intended to guide designers How can a high level of maintainability to better integrate them into a product, from and makes the maintenance costs can be reduced to an acceptable level. Can be taken to ensure that the necessary maintenance work to make products in a safe environment, and to ensure that the product can be run according to performance requirements is very important.

GB/T 9414 This section introduces the concept of the maintenance and repair of how to combine the specification and contracts, and how Maintainability As part of the design process to consider the guidance given. The following section constitutes the credibility of a part of the standard system.

GB/T 6992.1 and GB/T 6992.2 standard is the credibility of the top, which is how the credibility (including reliability, availability and maintenance Repairability) combine to provide guidance on product manufacturing. GB/T 9414.1 standard is the top level of maintenance, it is as an application guide GB /part of the task described in T 6992.2, can be used to implement complete, including product design, development and maintenance of the session count Draw. This part also to achieve optimum maintainability, consider how the maintenance task provides guidelines.

Maintainability Part 2. Design and development phase Maintainability requirements and studies

1 Scope

This section GB/T 9414 raised maintainability requirements and related design and use parameters are discussed to achieve the maintenance requirements and needs Relationship between the necessary work to be carried out and how they work and maintenance plans, and describes a general method for this purpose as well as in the contract or regulations How to explain the scope of the maintenance of the properties.

This section does not give a detailed description of how the maintenance of all the guidelines and how to enter into service contracts of. Only it sets out (to mention only when the maintenance of the properties included in a beginning) product development, how to consider the maintenance requirements.

This section details the maintenance study in the preliminary design stage and detailed design stage, as with the other two phases of repair Maintenance and support tasks interlinkages, will be described in the relevant standard. This section also includes maintenance considerations in the design review.

This section will help you determine the maintenance product targets and associated maintenance plan.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

IEC 60050 (191).1990 Electrotechnical terminology credibility and quality of service (InternationalElectrotechnicalVocabulary (IEV) -Chapter191. Dependabilityandqualityofservice) IEC 60300-3-1 Dependability management - Part 3-1. Application guide credibility analysis methodological guide (Dependabilitymanagement-Part 3-1. Applicationguide-Guideonmethodology) IEC 60300-3-3 Dependability management - Part 3-3. Application guide life-cycle costing (Dependabilitymanage-ment-Part 3-12. Applicationguide-Lifecyclecosting) IEC 60300-3-10:2001 Dependability management - Part 3-10. Application guide (Dependabilitymanagement-Part 3-10. Applicationguide-maintainability) IEC 60300-3-11 Dependability management - Part 3-11. Application guide reliability centered maintenance (Dependability management-Part 3-12. Applicationguide-Reliabilitycentredmaintenance) IEC 60300-3-12 Dependability management - Part 3-12. Application guide Integrated Logistics Support (Dependabilitymanage-ment-Part 3-12. Applicationguide-Integratedlogisticsupport) IEC 60300-3-14 Dependability management - Part 3-14. Application guide repair and maintenance support (Dependabilitymanage-ment-Part 3-14. Applicationguide-MaintenanceandMaintenancesupport) IEC 60706-3 Guide on