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

GB/T 9414.3-2012

Replacing GB/T 9414.5-1988; GB/T 9414.6-1988

**Maintainability of equipment -- Part 3: Verification and
collection, analysis and presentation of data**

维修性 第3部分：验证和数据的收集、分析与表示

(English Translation)

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Table of Contents

Introduction

Introduction

1 Scope

2 Normative references

3 Terms and definitions

4 Maintainability testing Introduction

4.1 Authentication purposes

4.2 Effect of maintainability verification of maintenance support factor

4.3 Method 2 verification

4.4 Verification Program

4.5 Conditions and limitations

4.6 Qualitative and quantitative verification procedures

5 5 qualitative validation procedures

5.1 Design Review

5.2 Test procedure 5 Review

5 Maintenance 5.3 Degree of difficulty

5.4 Maintenance Task Analysis Review

6 5.5 Operating Review process

6 Quantitative verification program

6.1 Maintainability Prediction

6.2 Based on demonstration test validation

6.3 Based on field data verification

7 7 Demonstration

7.1 Introduction

7.2 Demonstration program

7.3 Demonstration Programme

7.4 Conditions and Restrictions

7.5 Demonstrates improved validation

Points 8 validator

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 39414 Part of.

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

This Part replaces GB/T 9414.5-1988 "Guide on maintainability of equipment Part VI. Repair verification" and GB/T 9414.6-1988 "Guide on maintainability of equipment Part 7. Collection of data, analysis and representation." This portion of the GB/T 9414.5-1988 and GB/T 9414.6-1988 compared to the main changes are as follows.

- Standard name "Guide on maintainability of equipment" unified to "repair" of;
- Standard structure using IEC 60706-3:2006;
- There is content in the relevant clauses of the Amendment, such as increasing the corrective maintenance (see 9.6.2);
- Adds two appendices. B maintainability demonstration test method Appendix, C maintainability data analysis appendix.

This section uses the translation method is equivalent to using IEC 60706-3. validation and data collection, analysis. "Equipment Maintenance - Part 32006 and representation. " 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 7828-2012 Design Review (IEC 61160Ed.2.2005, IDT)
- GB/T 9414.1-2012 Maintenance - Part 1. Application guide (IEC 60300-3-10:2001, IDT)
- GB/T 9414.2-2012 Maintainability Part 2. Design and development phase and research requirements (IEC 60706-2:2006, IDT) this part of the National Electrotechnical Standardization Technical Committee Electronic Product Reliability and Maintainability (SAC/TC24) centralized.

This section is drafted. Beijing University of Posts and Telecommunications Ministry of

Information Industry and Industrial Research Institute of Posts and Telecommunications Standardization.

Introduction

Product design requirements including effective maintenance technology to ensure that products continue to work properly. Before the product is put into use, it is necessary to verify that the proposed maintenance program can perform like that design, data collection and analysis of the entire verification process is an indispensable part.

Data used for authentication can have many sources, data source used in a particular case depends on many factors, including the availability of history data and design status. Verify that the maintenance of the target has been achieved, better than the product test data generated in product validation.

Historical data are classified into related topics from which to choose useful data, analyzes the data to provide the required information.

This section GB/T 9414 related to the use of technical analysis explains some of the verification process. Design verification program to verify maintenance procedures, Tools and instruments needed for maintenance, technical information and product maintenance ease. This maintenance program can be improved, if necessary, to modify the product to improve its maintainability. It is important to be as early as possible, preferably before the start of production of the desired product to product design changes contained in, in order to minimize costs.

In most cases, this preliminary analysis is based on statistical analysis of small sample data. Thus, after the products into use, the best continue to collect and analyze data to enable accurate verification process improvement. Since the initial validation of analytical evaluation is not easy, so these data heavy to, will decide whether there is enough maintenance support.

This section contains the credibility of the standard system, the system will be described in detail below.

GB/T 6992.1 and GB/T 6992.2 standard is the top technical credibility, which is how the credibility (including reliability, availability and maintainability) combine to provide guidance on product manufacturing. IEC 60300-3-10 is the top standard of maintenance, it is as an application guide 6992.2 part of the task is described in GB/T , it can be used to implement complete, including product design, development and maintenance of the planned session.

This part also to achieve the best maintenance of the maintenance tasks to consider how to provide guidance.

Maintenance - Part 3. Validation and data collection, Analysis and Expression

1 Scope

This section GB/T 9414 gives the various aspects of maintainability testing necessary to ensure that products meet the prescribed maintenance requirements;

This section also provides the appropriate procedures and test methods. Maintainability testing should be any maintainability program an essential part (see IEC 60300-3-10:2001), for each different occasions need to select the appropriate method carefully, to ensure that the overall cost-effectiveness.

This section also relates to a product during the design, the design is completed, the collection and use during production, it may require repairs related data points Analysis and presentation.

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 (International Electrotechnical Vocabulary (IEV) -Chapter191. Dependability and quality of service) IEC 60300-3-10:2001 Dependability management - Part 3-10. Application guide (Dependability management-Part 3-10. Application guide-maintainability) IEC 60300-3-12 Dependability management - Part 3-12. Application guide Integrated Logistics Support (Dependability management-Part 3-12. Application guide-Integrated logistics support) IEC 60300-3-14 Dependability management - Part 3-14. Application guide repair and maintenance support (Dependability management-Part 3-14. Application guide-Maintenance and Maintenance support) IEC 60706-2 Maintenance - Part 2. Design and development phase requirements and Research (Maintainability of equipment-Part 2. Maintainability studies during the design phase) IEC 61160 Design Review (Design review) Lower confidence limit IEC 61649 Weibull distribution data, confidence intervals and goodness of fit tests (Goodness-of-fit tests, confidence intervals and lower confidence limits for Weibull distributed data) Goodness of fit test IEC 61710 power law model and estimation methods (Power law model-Goodness-of-fit tests and estimation methods)

3 Terms and Definitions

IEC 60050 (191).1990 and as defined in the following terms and definitions apply to this document.

User selected device customer selected equipment Product portion designated by the user.