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

GB/T 29076-2021

**Execution requirements of quality problem closed loop for
aerospace product**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1. Structure and Drafting Rules of Standardization Documents" Drafting.

This document replaces GB/T 29076-2012 "Aerospace Product Quality Problem Zeroing Implementation Requirements", compared with GB/T 29076-2012,

In addition to editorial changes, the main technical changes are as follows.

- Changed the description of the scope (see Chapter 1, Chapter 1 of the 2012 edition);
- Added the definition of the terms "root cause" and "root cause analysis" (see 3.16, 3.17);
- Changed the definition of the term "quality problem to zero" and "repetitive quality problem" (see 3.1, 3.14, 3.1, 3.14 of the 2012 edition);
- Increased the scope of technology zeroing "causing cost, schedule, efficiency or system application degradation quality problems" (see 4.2);
- Added the general requirements in Chapter 4 about carrying out product-oriented, process-oriented, and organization-oriented analysis, which is difficult to completely return to zero.

Make plans, reviews, key nodes and other requirements (see 4.1.4, 4.1.7, 4.4.1, 4.4.2, 4.4.3);

---Added the quality problem report before and after the formal implementation of the quality problem to zero, emergency treatment, establishment and dissolution of the team, etc.

Procedure (see 5.2, 5.3, 5.4, 5.8, 5.9);

---Added the work requirements for technical zeroing and management zeroing (see Chapter 6 and Chapter 7);

---Added the main content of the technical zeroing report and management zeroing report (see Appendix A).

This document is drafted with reference to ISO 18238:2015 "Management of the Resolution of Closed-loop Problems in Space Systems", and the degree of consistency is non-equivalent.

Introduction

The zeroing of quality problems is a closed-loop management method of quality problems with Chinese aerospace characteristics summarized in the practice of aerospace

engineering.

It provides a set of systematic and scientific procedures and methods for completely eliminating quality hidden dangers, solving quality problems and avoiding the recurrence of problems. Quality question

The problem of zeroing has been successfully practiced in aerospace. Through the implementation of quality problem zeroing, the problem can be accurately located, and the origin of the problem can be analyzed in depth.

Causes and mechanisms, effectively identify the weak links of quality management, improve management, optimize processes, and improve product quality and reliability.

It has been eight years since GB/T 29076-2012 was released and implemented. During this period, the zeroing of quality problems has played an increasingly important role in the quality control of aerospace products.

Important role. With the increase in space missions, the rapid increase in the number of collaborative supporting products and suppliers, and the vigorous development of commercial aerospace

The application of quality problem zeroing in the aerospace field continues to deepen, and the connotation of quality problem zeroing continues to expand. At the same time, the International Organization for Standardization

ISO 18238:2015 "Management of closed-loop problem solving in space systems" was released in 2015, and there are certain amendments to GB/T 29076

Reference meaning. In view of this, it is indeed necessary to revise and improve GB/T 29076 to meet the new requirements of aerospace product quality management and promote aerospace products

New experience of zeroing quality problems, unified and standardized implementation procedures and requirements for zeroing quality problems.

Implementation requirements for zeroing the quality problems of aerospace products

1 Scope

This document specifies the general requirements, procedures, technical zeroing work requirements and management zeroing work requirements for aerospace product quality problems.

content.

This document is applicable to the zeroing of quality problems in various stages of aerospace product design, production, testing, and use.

2 Normative references

The contents of the following documents constitute the indispensable clauses of this document through normative references in the text. Among them, dated quotations

Only the version corresponding to that date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

This document.

GB/T 19000 Quality Management System Foundation and Terminology

3 Terms and definitions

The following terms and definitions defined in GB/T 19000 apply to this document.

3.1

Quality problem zero qualityproblemclosedloop

For quality problems that have occurred, analyze the causes and mechanisms of technology and management, and take corrective and preventive measures to fundamentally

Eliminate problems and avoid recurring activities.

Note 1.The zeroing of quality problems is divided into technical zeroing and management zeroing, sometimes referred to as "double five points" zeroing.

Note 2.Quality problems include malfunctions, defects, accidents and other undesirable situations.

3.2

Technologyclosedloop

In response to the quality problems that occur, technically follow the five requirements of "accurate positioning, clear mechanism, recurring problems, effective measures, and inferences from one another".

Seek to implement item by item, and form the activity of technical zeroing report, related technical documents and certification materials.

3.3

Accurate location

Determine the exact location where the quality problem occurred.

Note. Accurate positioning is to find out which link, which product, which component, which part, which electronic component or which component the problem occurs in, and confirm