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

GB/T 46290-2025

**Aircraft and space - Industrial data - Product identification and
traceability**

航空航天 工业数据 产品标识与可追溯性

(English Translation)

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Foreword

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

Drafting.

This document is modified to adopt ISO 21849:2022 "Aerospace industry - Data product identification and traceability".

This document has undergone the following structural adjustments compared to ISO 21849:2022.

---3.1 corresponds to Chapter 3 of ISO 21849:2022, with the addition of 3.2;

---Appendix A corresponds to Annex I of ISO 21849:2022;

---Appendix B corresponds to Appendix C of ISO 21849:2022;

---Appendix C corresponds to Appendix H of ISO 21849:2022;

---Appendix D corresponds to Appendix G of ISO 21849:2022;

---Appendix E corresponds to Appendix A of ISO 21849:2022;

---Appendix F corresponds to Appendix D of ISO 21849:2022;

---Appendix G corresponds to Appendix E of ISO 21849:2022;

---Appendix H corresponds to Appendix B of ISO 21849:2022;

---Appendix I corresponds to Annex F of ISO 21849:2022.

The technical differences between this document and ISO 21849:2022, and the reasons therefor, are as follows.

---Abbreviations have been added (see 3.2) to increase adaptability and improve operability;

---ISO/IEC 15417 (see 4.1, 7.3, and 8.3.2) has been replaced with the normatively referenced GB/T 18347 to increase adaptability and improve...

High operability;

---The normative standard GB/T 41208 has replaced ISO/IEC 16022, and GB/T 18284 has replaced ISO/IEC 18004.

(See 4.1 and 8.3.1) to increase adaptability and improve operability;

---ISO/IEC 16388 (see 4.1 and 8.3.2) has been replaced with the normatively referenced GB/T 12908 to increase adaptability and improve reliability.

Operability;

---ISO/IEC 646 (see 4.1 and 8.8) has been replaced with the normatively referenced GB/T 1988 to increase adaptability and improve operability.

Actual nature;

---ISO/IEC 15434 (see Chapters 7 and 8.3) has been replaced with the normatively referenced GB/T 42443 to increase adaptability and improve...

Operability;

---ISO/IEC 15418 (see 7.1, 7.3, 7.4 and Annex G) has been replaced with the normatively referenced GB/T 16986 to increase compliance.

Sexuality improves operability;

---ISO/IEC 15416 has been replaced by the normatively referenced GB/T 14258, and ISO/IEC 15415 has been replaced by GB/T 23704.

(See 8.9.2.2.1) to increase adaptability and improve operability;

---ISO 8601-1 (see Annex H) has been replaced with the normatively referenced GB/T 7408.1-2023 to increase adaptability and improve compliance.

Operability.

The following editorial changes have been made to this document.

---ISO/IEC 15424 has been replaced with GB/T 45287, which is used for informational purposes.

Please note that some content in this document may involve patents. The issuing

organization of this document assumes no responsibility for identifying patents.

This document was proposed and is under the jurisdiction of the National Aircraft Standardization Technical Committee (SAC/TC435).

Introduction

Using automatic identification technology to replace manual input can improve the accuracy of data collection and exchange among trade stakeholders. Automatic identification technology includes...

Matrix symbols, one-dimensional barcodes, and radio frequency identification (RFID) tags, etc. (see Appendix A).

The application of automatic identification technology provides information management systems with accurate, timely, and efficient data input methods, and enables data transmission and storage.

Storage is more convenient.

This document defines and establishes a repeatable process and data structure for product identification and traceability, regardless of product/part ownership.

Regardless of changes in structure, repeatable processes and data structures can support the entire product/part lifecycle management (see Appendix B). This document describes...

The product identification and traceability solution described above enables error-free data entry, parts tracking, shipping, inventory management, and maintenance throughout the entire product/part lifecycle.

Management of repair, import/export, and inspection and repair of unapproved parts. Product identification and traceability data structures allow for efficient management by trade stakeholders.

Shared data (see Appendix C). The product identification and traceability processes defined in this document facilitate product data management, asset management, and structure.

Macro-level control over management, reliability and maintenance management, and product performance management.

The establishment of a universal dataset, definition, and format for product identification and traceability lays the foundation for information exchange throughout the product lifecycle.

The product identification and traceability schemes defined in this document must meet the following requirements.

---Provide a unique and permanent identifier throughout the entire product lifecycle;