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

GB/T 34594-2017

Supply chain applications of RFID -- Freight containers

射频识别在供应链中的应用 集装箱

(English Translation)

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses the translation method identical with ISO 17363:2013 "RFID in the supply chain application container." the documents of our country that are consistent with the corresponding international documents that are normative references in this standard are as follows.

--- GB/T 7408 data elements and exchange format information exchange date and time representation (GB/T 7408-2005, ISO 8601.

2000, IDT);

--- GB/T 17626.2 Electromagnetic compatibility test and measurement techniques Electrostatic discharge immunity test (GB/T 17626.2-2006, IEC 61000-4-2:2001, IDT).

This standard made the following editorial changes.

- a) The headline of Chapter V of the original text was reshaped according to the content and changed to "5 Container Identification and Supply Chain Level";
- b) Corrections to individual editorial errors in the original text, see 10.7 and Appendix B.5E;
- c) For ease of understanding, three additional notations are added after Appendix B;
- d) An informative appendix on abbreviations has been added for ease of use. See appendix NA.

This standard by the National Container Standardization Technical Committee (SAC/TC6) and focal point.

This standard was drafted unit. Shanghai Maritime University, Ministry of Transport Water Transport Institute of Science and Technology.

Introduction

The "supply chain" is a multi-layered concept that covers the process of moving a product from raw material to finished product and shipping it to the final sales place in all aspects. Among them, each level contains many aspects of product processing, all levels of business processes involved are unique, and Other levels related.

This standard was developed to "RFID in the supply chain application" set of standards in the other four standards at the physical layer, the control layer and Data layer to achieve compatibility. Although the data in these standards do not have the format interchangeability due to their different structures, the standard itself can be to use together and without disturbing each other. These standards include.

- ISO 17363 RFID in the supply chain application container;
- ISO 17364 RFID in the supply chain applications Recyclable transport equipment (RTIs) and recyclable packaging items (RPis);
- ISO 17365 RFID in the supply chain transport unit;
- ISO 17366 RFID in the supply chain application product packaging;
- ISO 17367 RFID application in the supply chain product label.

The above-mentioned international standards define the technology of the various levels of the supply chain and the data stratification of the supply chain management information required therein. stand by these standard air interface and communication protocols are the ISO/IEC 18000 and ISO/IEC/IEEE 8802 series of standards, command and information standards the standards are ISO/IEC 15961 and 15962, the semantic standard is ISO/IEC 15418, and the syntactic standard is ISO/IEC 15434.

This standard is not listed, but the relevant documents in the content included.

ISO/IEC JTC1/SC31 Technical standards for air interface, data semantics, syntactical structure and consistency;

ISO TC104 for container safety, including electronic enclosure (ISO 18185) and container identification aspects.

RFID applications in the supply chain container

1 Scope

This standard for supply chain management, provides a readable and writable RFID (radio frequency identification, text all the abbreviations see reference Appendix NA)

Freight-specific labels 1) Application requirements in container transport. This standard specifies the air interface protocol and a set of common necessary data knot Structure, and provides a common set of alternative data requirements through public syntax and semantics.

1) The original text of the International Standard ("manifesttags"), abridged here.

This standard.

Give advice on second generation supply chain labels that monitor the condition of the goods in the container and their safety;

--- Specified for the use of sensors for monitoring the contents of the container;

--- For shipping labels can not reset the mandatory information made special recommendations;

--- make special recommendations on resettable optional information on shipping labels;

Make special recommendations for the data link interface to GPS or GLS services;

--- Detailed provisions of the repeated use of radio frequency tags and recycling;

--- Specified in the RF tag data in the barcode, two-dimensional code and human readable information backup.

2 Compliance and performance requirements

The following conformity requirements of this standard provide the necessary framework for improving the level of synergy between each part of this standard and the system.

It also leaves room for subsequent technical improvements and evolutions.

Container cargo supply chain RFID system (hereinafter referred to as RFID system) and the realization of the system components to achieve and support the following 6 requirements, it is considered in line with this standard.

- a) the functional requirements of Chapter 6;
- b) the data requirements of Chapter 7;
- c) the data security requirements of Chapter 8;
- d) the labeling requirements of Chapter 9;
- e) the labeling requirements of Chapter 10;
- f) the safety and privacy requirements of Chapter 11.

3 Normative references

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

GB/T 1836-1997 container code, identification and marking (idtISO 6346.1995) GB/T 17894-1999 automatic container identification (idtISO 10374.1991) ISO 8601 data elements and exchange formats Date and time information exchange (Dataelementsandinterchange formats-Informationinterchange-Representationofdatesandtimes) ISO/IEC/IEEE8802-15-4 Information technology systems for communication and information exchange LAN and MAN specific requirements