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

GB/T 19114.43-2010

**Industrial automation systems and integration -- Industrial manufacturing
management data -- Part 43: Manufacturing flow management data: Data model
for flow monitoring and manufacturing data exchange**

工业自动化系统与集成 工业制造管理数据 第43部分：制造流程管理数据：流程
监控与制造数据交换的数据模型

(English Translation)

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Foreword

GB/T 19114 "Industrial automation systems and integration - Industrial manufacturing management data" are divided into the following sections.

- Part 1. Industrial manufacturing management data. Survey;
- Part 21. Expression product specification external exchange of data;
- Part 31 to Part 33. Expression of manufacturing resource application management data;
- Part 41 to Part 44. Expression of manufacturing process management data.

GB/T 19114 "Industrial automation systems and integration - Industrial manufacturing management data" now available include the following sections and upcoming.

- Part 1. Industrial manufacturing management data. Survey

--- Part 31. Resource information model

--- Part 32. Conceptual Model Application resource management data

--- Part 42. Time Model

--- Part 43. Manufacturing Process Management data. process monitoring and data exchange data model

--- Part 44. Manufacturing Management Information Modeling plant floor data collection this section is GB/T 4319114 Part of this part identical with ISO 15531-43:2006, in terms of technical content and structure 2006 unanimously. with ISO 15531-43. In the preparation of the rules in line with GB/T 1.1-2000, for ease of use, we made the following editorial changes.

a) by deleting the ISO foreword;

b) to the "international standards" and ISO 15531 to "GB/T 19114";

c) the normative references have been translated into national standards with international standards Renumber national standard number, including the original and subsequent the number given in the national standards currently applicable version numbers and their corresponding international standard version number. Still refers to the unconverted International standards.

Appendix A of this section is normative appendix, Appendix B and Appendix C are informative appendices.

This part is proposed by China Machinery Industry Federation.

This part of the automation systems and integration by the National Standardization Technical Committee (SAC/TC159) centralized.

This part mainly drafted by. China National Institute of Standardization, Chongqing Institute of Standardization.

Introduction

Information on the manufacturing process of industrial products produced for the product's life cycle is very important, especially in a sustainable development Environment. Manufacturing can be defined as the conversion of raw materials or semi-finished products to the grounds. Manufacturing management in the entire production cycle, from expect Finished product delivery logistics plays a guiding and regulating role, including the impact on resource management.

Logistics and information flow of a manufacturing management system manages the entire manufacturing chain, from suppliers, manufacturers, integrators to distributors, sometimes Including customers.

In order to facilitate the electronic exchange of information, it can be determined and composed in the form of data between partners. So when exchanging information processing must by using product and manufacturing data modeling standards, in a way that can be shared by the majority of partners to identify, model and expression.

Manufacturers of production planning functions and the main production planners main manufacturers have a great relationship, he provided information to manufacturers to supply Suppliers will plan their production. Main manufacturers of the operating system continue to plan to issue orders to suppliers to ensure that member, and other components Production and assembly process requires resources.

GB/T 19114 is an industrial manufacturing management data computer interpretable expression and the standard exchange. Its object is to provide a Neutral mechanism that can be produced by the same process in an industrial company and its external environment to describe the industrial manufacturing management Data, it is independent of any particular system. This substance described it applies not only to neutral file exchange, but also as a real and now manufacturing management database sharing and archiving foundation.

The standard multi-part, each part published separately, the standards are divided into. foreign exchange product data, manufacturing resource data management application, Time model data management and manufacturing process management.

GB/T 19114 in this part of the data model through the establishment of manufacturing processes and procedures described in connection with the manufacturing process and process management Related data representation, and highlighted in this section with other standards developed by ISO TC184/SC4. such as ISO 10303 Relations (GB/T 18975) between (GB/T 16656), ISO 13584 (GB/T 17645), ISO 15926, in addition, this section to develop the application of GB/T 16656.11 second edition of the EXPRESS language, which is an extension application of GB/T 16656.41 several structures, and also cited GB/T 17645 dictionary.

Industrial automation systems and integration - Industrial manufacturing management Data
- Part 43. Manufacturing Process Management data.

Process monitoring and manufacturing data model, data exchange

1 Scope

GB/T 19114 into the headquarters process management provides a data model and an associated set of building blocks, with GB/T 19114 of Part 42 different models of time. Plan logistics and information flow, scheduling, data model and expression control and monitoring standards are through Through the data model and set of building blocks to describe.

Therefore, this section to provide a data on process control and management in the manufacturing process by establishing a conceptual process model expression.

This section applies to.

--- Expression and manufacturing process management and control related data.

Note: This information is usually provided inside the main manufacturers, the exchange between different plant or production units.

This section does not apply to.

--- Exchange of information about the external modeling;

--- Information about the manufacturing process resource modeling application;

--- About the temporal expression of information modeling.

2 Normative references

The following documents contain provisions which, through reference GB/T 19114 in this section constitute provisions of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 16262.1 Information technology - Abstract Syntax Notation One (ASN.1) - Part 1. Specification of basic notation (GB/T 16262.1-2006, ISO/IEC 8824-1:2002, IDT) GB/T 16656.11 Industrial automation systems and integration - Product data representation and exchange - Part 11. Description methods.

EXPRESS language reference manual (GB/T 16656.11-2010, ISO 10303-11:2004, IDT)

16656.41 Industrial automation systems and integration - Product data representation and exchange GB/T Part 41. Product description and support the original Li (GB/T 16656.41-2010, ISO 10303-41:2005, IDT) GB/T 16656.49 Industrial automation systems and integration - Product data representation and exchange - Part 49. Process structure and special Sex (GB/T 16656.49-2003, ISO 10303-49:1998, IDT) GB/T 17645.1 Industrial automation systems and integration - Parts library - Part 1. Overview and fundamental principles (GB/T 17645.1-2008, ISO 13584-1:2001, IDT).

Part 24 GB/T 17645.24 Industrial automation systems and integration Parts library. Logical resource. Logical model of supplier library (GB/T 17645.24-2003, ISO 13584-24:2002, IDT)

Part 42 GB/T 17645.42 Industrial automation systems and integration Parts library. Description methodology. Methodology for structuring parts families method Science (GB/T 17645.42-2001, ISO 13584-42:1998, IDT) GB/T 19114.1 Industrial automation systems and integration - Industrial manufacturing management data - Part 1. Review (GB/T