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

GB/T 19114.44-2012

**Industrial automation systems and integration -- Industrial
manufacturing management data -- Part 44: Information
modelling for shop floor data acquisition**

工业自动化系统与集成 工业制造管理数据 第44部分：车间级数据采集的信息建模

(English Translation)

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Foreword

GB/T 19114 "Industrial automation systems and integration - Industrial manufacturing management data" consists of the following components.

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

Part 1,31,32,42,43 which has been converted to our national standard.

This part of GB/T 19114 Part 44.

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

This section uses the translation method identical with ISO 15531-44:2010 "Industrial automation systems and integration - Industrial manufacturing management data -Part 44. Drag-level data collection information modeling, "in technical content and structure of ISO 15531-44:2010 agreement.

Consistency correspondence between this part of international documents and normative references of our files are as follows.

- GB/T 16656.11-2010 Industrial automation systems and integration - Product data representation and exchange - Part 11. Description Party Method. EXPRESS language reference manual (ISO 10303-11:2004, IDT);
- GB/T 17645.1-2008 Industrial automation systems and integration Parts library Part 1. Overview and fundamental principles (ISO 13584-1:2001, NEQ);
- GB/T 17645.24-2003 Industrial automation systems and integration - Parts library - Part 24. Logical resource. vendor library the logical model (ISO 13584-24:2002, IDT);
- GB/T 19114.1-2003 Industrial automation systems and integration - Industrial manufacturing management data - Part 1. Summary (ISO 15531-1:2002, IDT);
- GB/T 19114.31-2008 Industrial automation systems and integration - Industrial manufacturing management data - Part 31. Resource information Model (ISO 15531-31:2004, IDT);
- GB/T 19114.32-2008 Industrial automation systems and integration - Industrial manufacturing management data - Part 32. Application Resources Conceptual model of management data (ISO 15531-32:2005, IDT);
- GB/T 19114.42-2008 Industrial automation systems and integration - Industrial manufacturing management data - Part 42. Time Model (ISO 15531-42:2005, IDT);

--- GB/T 19114.43-2010 Industrial automation systems and integration - Industrial manufacturing management data - Part 43. Production flow tube Data management. data flow monitoring and manufacturing data exchange data model (ISO 15531-43:2006, IDT).

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 section drafted by. China National Institute of Standardization.

Introduction

GB/T 19114 is manufacturing management activities for the national standards for data modeling (not including the use of ISO 10303 and ISO 13584 standard modeling and data products and parts catalog or library data). Wherein Part 31 and Part 32 Standardized manufacturing resource modeling application management data; Part 43 standardized manufacturing management data modeling; Part 42 gives the time model.

Other manufacturing data management for use in the manufacture of control layer comprises a part of the data collection and management in the storage and use of these data for the manufacture of quality, maintenance, dispatch management or any other manufacturing management activities.

These data collection due to the constraints of equipment and technology, often using a variety of different formats. And collect data related to time Stamp and time measurement, as well as acquisition-related batch and resources need to be an effective way to manage manufacturing activities. existing each time measurement and time stamps for specific resources, the measurement result is further associated with a unique time model and time.

After making multiple conversions handling and processing of these collected from the second layer (layer manufacturing control) to the raw data becomes a Layer 3 (management Layer) data. These data are stored in the database, the database collected in accordance reusable Layer 3 model organization and management of all pre-defined mining Set data. Although several sources of information may appear several times, but then used in various manufacturing management software of these data, Means that the corresponding data model for a given message has been defined in terms of a complete and unique.

Note: As used herein, the definition of the functional layer from IEC 62264-1, in order to help understand the re-described in the section in Chapter 4. Monitoring and control of the physical device Belonging to layer 2, and the management of the manufacturing process of activities belonging to the third layer. This part of the specification of the model Layer 3 data, the data is collected from Layer 2 Finishing the original data and the conversion and processed data. Conversion and processing of the data does not belong to the contents of this section.

The purpose of this section is to provide an easy to manage and improve manufacturing activities and sharing model data.

Industrial automation systems and integration Industrial manufacturing management data
Part 44. modeling information-floor data collection

1 Scope

GB/T 19114 provisions of this part of the modeling of the data acquisition system at the control layer collected, the data is stored in the system Building management, so that management of the manufacturing data for further processing.

The following fall within the scope of this section.

- Data acquisition system at the control level or management collected quantitative or qualitative data, which is stored in the management and for post Continued manufacturing management;
- In order to control and manage the data by the data acquisition system is given a time stamp and the time measurement.

The following does not belong to the scope of this section.

- Any data only with the remote management and real-time measurement and related;
- According to the method given in ISO 10303 for product definition data modeling;
- According to the method given in ISO 13584 and ISO 15926 library classification and data modeling;
- Use only the data in the control layer of control, and manufacturing data management activities that are not used.

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.

ISO 10303-11 Industrial automation systems and integration - Product data representation and exchange - Part 11. Description methods. EXPRESS Language Reference Manual (Industrialautomationsystemsandintegration-Productdatarepresentationand exchange-Part 11. Descriptionmethods. TheEXPRESSlanguagereferencemanual) ISO 13584-1 Industrial automation systems and integration - Parts library - Part 1. Overview and basic principles (Industrial automationsystemsandintegration-Partslibrary-Part 1. Overviewandfundamentalprinciples) Part 24 ISO 13584-24 Industrial automation systems and integration Parts library. Logical resource. Logical model of supplier library