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

GB/T 16656.43-2008

Replacing GB/T 16656.43-1999

**Industrial automation systems and integration -- Product data
representation and exchange -- Part 43: Integrated generic
resource: Representation structures**

工业自动化系统与集成 产品数据表达与交换 第43部分：集成通用资源：表达结构

(English Translation)

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Foreword

It is a multi-part standard GB/T 16656 "Industrial automation systems and integration - Product data representation and exchange" ministries Points published separately. GB/T 16656 and the relevant portions of the composition of a plurality of sub-series, namely.

--- Part 1 to 19 of the provisions described methods;

Part --- 20 to 29 provides for implementation;

--- 30 to Part 39 specifies conformance testing methodology and framework;

Part --- 40 to 59 of the provisions of the Integrated generic resources;

--- Part 100 to 199 of the provisions of the integrated application resources;

--- Section 200 and Section 299 specifies the application protocol;

--- Section 300 to Section 399 defines the abstract test suite;

--- Section 400 and Section 499 provides for the application modules;

--- Section 500 and Section 599 provides for the application interpreted construct;

--- 1000 through the first part of 1999 provides for the application modules.

GB/T 16656 "Industrial automation systems and integration - Product data representation and exchange" has been released following 26 sections.

--- Part 1. Overview and fundamental principles;

--- Part 11. Description methods. EXPRESS language reference manual;

--- Part 21. Implementation methods. Clear text encoding of the exchange file structure;

--- Part 31. Conformance testing methodology and framework. General concepts;

--- Part 32. Conformance testing methodology and framework. Requirements on testing laboratories and customer requirements;

--- Part 34. Conformance testing methodology and framework. Abstract test methods for application protocol implementations;

--- Part 41. Integrated generic resources. Product description and support;

--- Part 42. Integrated generic resources. Geometric and topological representation;

--- Part 43. Integrated generic resources. Representation structures;

--- Part 44. Integrated generic resources. Product structure configuration;

--- Part 45. Integrated generic resource. Materials;

--- Part 46. Integrated generic resources. visual display;

--- Part 47. Integrated generic resources. Shape variation;

--- Part 49. Integrated generic resources. Process structure and properties;

--- Part 101. Integrated application resource. Drawing;

--- Part 105. Integrated application resource. Kinematics;

--- Part 201. Application protocol. Explicit draughting;

--- Part 202. Application protocol. Associative draughting;

--- Part 203. Application protocol. Configuration controlled design;

--- Part 501. Application interpreted construct. Based on the frame side;

--- Part 502. Application interpreted construct. Shell-based wireframe;

--- Part 503. Application interpreted construct. Geometrically bounded 2D wireframe;

--- Part 513. Application interpreted construct. Basic boundary representation;

--- Part 520. Application interpreted construct. Associative draughting elements;

--- Part 1001. Application module. Appearance assignment;

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--- Part 1006. Application module. basal expression.

This section is GB/T Part of 4,316,656. This part identical with ISO 10303-43:2000, prepared the technical content and format on the ISO 10303-43:2000 is consistent. Only due to be translated into national standards, in accordance with the requirements of national standards, as the following editorial changes.

For each underlined in bold for EXPRESS English language to describe the entity names, attribute names and function names, etc., in order both to maintain the English original intent but also easy to understand the meaning of its name represents, in this section, when it appears as the title, marked its Chinese translation; but in the text, mainly in English, only the first occurrence in the text, or when necessary, it will be enclosed in the Chinese translation of English name after.

This Part replaces GB/T 16656.43-1999 "Industrial automation systems and integration - Product data representation and exchange - Part 43.

Integrated generic resources. Representation structures. " Compared with GB/T 16656.43-1999 main changes are as follows.

1) Modify the following EXPRESS declaration.

--- Acyclic_mapped_representation;

--- Item_in_context;

--- Representation;

--- Uncertainty_measure_with_unit;

--- Using_representations.

2) adds the following EXPRESS declaration.

--- Compound_item_definition;

--- Compound_representation_item;

--- Founded_item;

--- Founded_item_select;

--- List_representation_item;

--- Representation_item_relationship;

--- Set_representation_item;

- Uncertainty_assigned_representation;
- Using_items;
- Valid_measure_value;
- Value_representation_item.

3) Modify the following EXPRESS data type definition.

- Functionally_defined_transformation;
- Global_uncertainty_assigned_context;
- Item_defined_transformation;
- Mapped_item;
- Parametric_representation_context;
- Representation_context;
- Representation_item;
- Representation_map;
- Representation_relationship;
- Representation_relationship_with_transformation.

4) Remove the ISO foreword.

5) modified Appendix B B. Identity documents and B. 1 Identification 2 mode.

6) Modify the entity name and short EXPRESS mode specified in Annex C download site.

This part of the Annex A, Annex B normative Annex, Appendices C and D are informative appendices.

This part is proposed by China Machinery Industry Federation.

GB/T 16656.43-2008/ISO 10303-43:2000 this part of the National Industrial automation systems and integration Standardization Technical Committee (SAC/TC159) centralized.

This section drafted by. China National Institute of Standardization.

Introduction

GB/T 16656 is a technical standard for computer interpretable expression product information and product data exchange. Its purpose is to Product Lifecycle provides an independent of any particular system, product data can describe neutral mechanism. Its function is not only suitable description for neutral file exchange, but also to achieve the foundation and sharing product databases and archiving. These categories in GB/T