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

GB/T 16656.505-2010

**Industrial automation systems and integration -- Product data
representation and exchange -- Part 505: Application
interpreted construct: Drawing structure and administration**

工业自动化系统与集成 产品数据表达与交换 第505部分：应用解释构造：图样结构与管理

(English Translation)

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Foreword

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

- Part 1 to Part 19 specifies the method described;
- Part 20 to Part 29 provides for implementation;
- Part 30 to Part 39 specifies conformance testing methodology and framework;
- Part 40 to Part 59 specifies Integrated generic resources;
- Part 100 to Part 199 provides integrated application resources;
- Part 200 to Part 299 specifies the application protocol;

- Part 300 to Part 399 specifies the abstract test suite;
- Part 400 to Part 499 specifies the application module;
- Part 500 to Part 599 specifies the application interpreted construct;
- Part 1000 through part of 1999 provides for the application modules.

GB/T 16656 "Industrial automation systems and integration - Product data representation and exchange" has been released and the upcoming release include the following section.

- 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 28. Implementation. XML data model and expression EXPRESS (using XML mode);
- 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 51. Integrated generic resource. Mathematical expression;
- Part 54. Integrated generic resource. Classification and set theory;
- Part 55. Integrated generic resources. Process and mixed expression;
- Part 56. Integrated generic resource. State;
- 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 238. Application protocol. computer numerical controller application interpreted model used;
- 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 504. Application interpreted construct. Drawing annotation;
- Part 505. Application interpreted construct. pattern structure and management;
- Part 506. Application interpreted construct. Drawing elements;
- Part 507. Application interpreted construct. Geometrically bounded surface;
- Part 508. Application interpreted construct. Non-manifold surface;
- Part 509. Application interpreted construct. Manifold surface;
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- Part 520. Application interpreted construct. Associative draughting elements;
- Part 1001. Application module. Appearance assignment;
- Part 1002. Application module. color;
- Part 1003. Application module. Curve appearance;
- Part 1004. Application module. Basic geometry;
- Part 1005. Application module. Basic topology;
- Part 1006. Application module. basal expression;
- Part 1007. Application module. General surface appearance;
- 1008. Application module. Layer assignment;
- Part 1009. Application module. Shape appearance and layers.

This section GB/T Part of 50,516,656.

This part identical with ISO 10303-505:2000 "Industrial automation systems and integration - Product data representation and exchange - Part 505 Score. Application interpreted construct. pattern structure and Management ", its technical content and structure and ISO 10303-504:2000 to maintain a consistent, easy to make with, made the following editorial

changes.

a) by deleting the ISO foreword;

b) For each underlined in bold for EXPRESS English language to describe the entity names, attribute names and function names, etc., in order to maintain its English original intent, in this section, uses its English name, only when it is used as the title, we have added in front of the English name its home type described.

This part of the Annex A, Annex B normative appendix, Appendix C, Appendix D is an informative annex.

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.

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Introduction

GB/T 16656 (ISO 10303) is a technical standard for computer interpretable expression product information and product data exchange.

Its purpose is to provide a product life cycle is independent of any particular system can describe the mechanism of neutral product data. Which describes work can not only suitable for neutral file exchange, but also to achieve the foundation and sharing product databases and archiving.

GB/T 16656 by a series of parts, each part published separately. GB/T 16656 all parts are belong to the following series A. Describe the method, resource integration, application interpreted construct abstract test suite implementation and conformance testing. ISO 10303-1 pair Series has been described above.

Application interpreted construct (AIC) gives a logical combination of interpretation constructed to support the use of product data in multiple application environment related special Setting function. Constructs is application protocol support sharing of information resources integration needs common explanation.

GB/T 16656 in this section is an integral part of the application interpreted construct series. This section provides a description of the hierarchy of the drawings, FIG.

Paper, drawing views, and management patterns and management information and drawings necessary to make a product and drawings related to the required information.