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

GB/T 19902.5-2011

**Industrial automation systems and integration -- Manufacturing
software capability profiling for interoperability -- Part 5: Methodology
for profile matching using multiple capability classes structures**

工业自动化系统与集成 制造软件互操作性能力建规 第5部分：基于多能力类结构
进行专规匹配的方法学

(English Translation)

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Foreword

GB/T 19902 "Industrial automation systems and integration - Manufacturing software capability profiling for interoperability" or has plans to release the following sections.

--- Part 1. Framework;

--- Part 2. Profiling methodology;

--- Part 3. Interface services, protocols and capability templates;

--- Part 4. Conformance testing methodology, the judge and reports;

--- Part 5. Regulations were designed to match the ability to multi-class structure based methodology;

--- Part 6. based on multi-class structure designed capacity gauge match the interface services and protocols.

This section GB/T 19902 Part 5.

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

This section uses the translation method identical with ISO 16100-5:2009 "Industrial automation systems and integration - Manufacturing software capability for interoperability Building Regulations Part 5. Regulations were designed to match the ability to multi-class structure based methodology "(English Version) Consistency correspondence between this part of international documents and normative references of our files are as follows.

GB/T 19902.2-2005 Industrial automation systems and integration - Manufacturing software capability profiling for interoperability - Part 2. Profiling Party Act On (ISO 16100-2:2003, IDT) GB/T 19902.3-2006 Industrial automation systems and integration - Manufacturing software capability profiling for interoperability - Part 3. Interface service Services, protocols and capability templates (ISO 16100-3:2005, IDT) GB/T 19902.4-2010 Industrial automation systems and integration - Manufacturing software capability profiling for interoperability - Part 4. Conformance Test methods, and sentenced the report (ISO 16100-4:2006, IDT) Technical content and composition and structure of this part of ISO 16100-5:2009 "Industrial automation systems and integration - Manufacturing software interoperability Ability Building Regulations - Part 5. Regulations were designed to match the ability to multi-class structure based methodology "(in English) is consistent only where needed, to do A few editorial changes.

a) capital retention abbreviation English name, remove the ISO foreword.

b) to the "international standards" and ISO 16100 to "GB/T 19902". The ISO 16100-5 to GB/T 19902 first Part 5 or GB/T 19902.5.

International standards c) the normative references have been translated into national standards with international standards Renumber national standard number, unconverted Quasi reserved.

d) by deleting the original text does not meet the standard of written words.

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 is responsible for drafting unit. Beijing Machinery Industry Institute of Automation, Southeast University.

Introduction

This national standard motivation stems from the strategic plan prepared by the ISO/TC184/SC5 discussion industrial and economic environment described special Notably.

a) growing vendor-specific solutions;

b) the difficulties encountered by users of the application criteria;

c) the need to migrate to a set of system integration tool module;

d) Recognizing the application software and the expertise to use the software but the company's assets.

GB/T 19902 is the national standard for the ability to standardize software described in this

description and is computer interpretable Human readable. Its goal is to provide a method for describing the manufacturing software capability, and its ability to apply these to life in the manufacturing sector Cycle-related tasks, does not depend on a particular system architecture or implementation platform. This can reduce the manufacturing and supply of application users Production and information management costs and Suppliers/providers.

GB/T 19902 in some charts in this section is based on the UML convention structure. Because all probability not included in the chart Read in the text has explained, it is assumed that the reader has some knowledge of UML.

Appendix A describes the generation manufacturing model (MDM) and manufacturing data (MDD) process.

Appendix B gives the ability to multi-class profile - matching examples.

Industrial automation systems and integration - Manufacturing software interoperability
Sexuality Building Regulations - Part 5. Multi junction capacity class Regulatory structure
be designed to match the methodology

1 Scope

This section GB/T 19902 describes the ability of the existing MSU special regulations and the required capability profile - matching capability from multiple class structure Methods and rules. These rules can be used to assess the methods and manufacturing applications of the MSUs Interoperability and in some cases Transsexual.

The following does not belong to GB/T 19902 scope of this section.

- Creation, registration, and access reference manufacturing model, various templates and the ability of manufacturing data structure class service;
- Conformance test table GB/T 19902.3 defined and designated Type 1 services;
- These templates to manage other services required in a database or object library equivalent.

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.

GB/T 19902.2-2005 Industrial automation systems and integration - Manufacturing software capability profiling for interoperability - Part 2. Profiling Party Act On (ISO 16100-2:2003, IDT) GB/T 19902.3-2006 Industrial automation systems and integration - Manufacturing software capability profiling for interoperability - Part 3. Interface service Services, protocols and capability templates (ISO 16100-3:2005, IDT) GB/T 19902.4-2010 Industrial

automation systems and integration - Manufacturing software capability profiling for interoperability - Part 4. Conformance Test methods, and sentenced the report (ISO 16100-4:2006, IDT) ISO 16100-1 Industrial automation systems and integration - Manufacturing software capability profiling for interoperability - Part 1. Framework (Industrial automationsystemsandintegration-Manufacturingsoftwarecapabilityprofilingforinteroperability-Part 1. Framework)

3 Terms and Definitions

ISO 16100-1, GB/T 19902.2, GB/T 19902.3 and GB/T 19902.4 as defined in the following terms and definitions as well as appropriate Used in this document.

Ability classes capabilityclass Designed capacity regulation method element describes a manufacturing activities and tasks related to software unit function and behavior. Inheritance junction capacity Configuration and deployment, said the ability to aggregate structure.

Note 1: MSU's role will change when used in various manufacturing activities, however MSU corresponding capacity class position in the inheritance structure is unique, but it may be considered in the polymeric structure at a different location.

Note 2: In this section, the ability equivalent to an ability class template (see GB/T 19902.2-2005 6.3 template capacity requirements).

[According to GB/T 19902.2-2005 in 3.3 adapted]