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

GB/T 20719.14-2010

**Industrial automation systems and integration -- Process
specification language -- Part 14: Resource theories**

工业自动化系统与集成 过程规范语言 第14部分：资源理论

(English Translation)

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Foreword

GB/T 20719 "Industrial automation systems and integration - Process specification language" is currently divided into the following sections.

--- Part 1. Overview and fundamental principles;

Part --- Article 11. PSL core;

Part --- Article 12. PSL outer core;

--- Part 13. Timing Theory;

--- Part 14. Resource theories;

--- Part 15. Performance activity theory;

Part --- Article 21. EXPRESS;

--- Part 22. XML;

Part --- Article 23. UML;

--- Part 41. Events;

--- Part 42. Time and status;

--- Part 43. Sequence;

--- Part 44. Definition of expansion. of resources;

--- Part 45. Category sets of resources;

--- Part 46. processing activities;

--- Part 47. Procedures purposes.

The main content GB/T 20719 as follows.

--- Part 1 sets out GB/T 20719 series of standards outlined its structure;

--- Part 11 to Part 15 defines the core theory, belongs 1x series;

--- The first part of the 21-23 section provides external mapping belonging 2x series;

--- Part 41 to Part 47 sets out the definition of the extension, is 4x series;

--- Further 2xx series provides guidance to perform the conversion.

This part of GB/T 20719 Part 14.

This part identical with ISO 18629-14:2006 "Industrial automation systems and integration - Process specification language - Part 14. Resource management on "(in English).

Technical content and structure of this section and ISO 18629-14:2006 is consistent, in the preparation of the rules in line with China GB/T 1.1-2000 "Standardization Guide Part 1. The structure and preparation of standard rules" for ease of use, made the following editorial changes.

a) by deleting the ISO foreword;

b) to the "international standards" and ISO 18629 to "GB/T 20719", the ISO 18629-1 to GB/T 20719 first Part 1 or GB/T 20719.1;

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 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.

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

Introduction

GB/T 20719 national standards for computer interpretable manufacturing processes related to information exchange. This section contains all the standard Points together provides a common language description of the manufacturing process, the process is the same

throughout the industrial enterprise or across multiple industrial sectors or enterprises the entire production process, and its expression is independent of any particular representation model. This language applies to all stages of the production process and manufacturing-related the process of sharing information.

This section GB/T 20719 provides the core elements of the language defined by the standard description.

This section and GB/T 20719 in the rest of the process is independent of any manufacturing management applications to make expression or model. he it provides a common framework to improve the interoperability of these applications are used.

Industrial automation systems and integration Process Specification Language Part 14.
Resource Theory

1 Scope

Depending on the scope of the GB/T 20719.1 described that referred to in this section and in Chapter 4 of this section by providing a series of axioms and definitions Expression belongs to the outer core language concepts. These axioms term oriented section provides axiomatic semantics.

The following items belong to the scope of this section.

- Resources;
- The relationship between resources and activities;
- Set of resources;
- increments.

2 Normative references

The following documents contain provisions which, through reference GB/T 20719 in this section constitute provisions of this section. For dated reference documents Member, subsequent amendments or revisions do not apply to this section, however, according to whether the parties are encouraged to study this part of the agreement You can 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 19114.1 Industrial automation systems and integration - Industrial manufacturing management data - Part 1. Review (GB/T 19114.1-2003, ISO 15531-1:2002, IDT) GB/T 20719.1 Industrial automation systems and integration - Process specification language - Part 1. Overview and fundamental principles (GB/T 20719.1-2006, ISO 18629-1:2004, IDT)

GB/T 20719.11 Industrial automation systems and integration - Process specification language - Part 11. PSL core (GB/T 20719.11-2010, ISO 18629-11:2005, IDT) ISO 18629-12 Industrial automation systems and integration - Process specification language - Part 12 PSL outer core

3.1 Terms and Definitions

The following terms and definitions apply to this part of the GB/T 20719 of.

3.1.1

Axiom axiom

Form language formed formula (well-formed formula). To be a constraint on the vocabulary in sign language interpretation.

[GB/T 20719.1, the definition 3.1.1] 3.1.2 Defined vocabulary defined lexicon Non-logical vocabulary of a series of symbols indicating the definition of the concept.

Note: The definition of words into constants, functions, and relations symbol.

Example. A traditional definition of the term.