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

GB/T 27758.3-2017

**Industrial automation systems and integration -- Diagnostics, capability
assessment and maintenance applications integration -- Part 3:
Applications integration description method**

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Foreword

GB/T 27758 "industrial automation systems and integrated diagnosis, capacity assessment and maintenance application integration" is divided into three parts.

--- Part 1. General and general requirements;

--- Part 2. Fields of application matrix element description and definition;

--- Part 3. Application integration description.

This section GB/T 27758 Part 3.

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

This section uses the translation method identical with ISO 18435-3:2015 "industrial automation systems and integrated diagnosis, capacity assessment and maintenance

Application Integration Part 3. Application Integration Description Method. "

The documents of our country that are consistent with the corresponding international documents that are normative references in this section are as follows.

--- GB/T 19659.1-2005 Industrial automation systems and integrated open systems application integration framework Part 1. General reference

Description (ISO 15745-1:2003, IDT)

This part is proposed by China Machinery Industry Federation.

This part of the National Automation System and Integration Standardization Technical Committee (SAC/TC159) centralized.

This section is drafted. Beijing Institute of Machinery Industry Automation.

Introduction

GB/T 27758 defines an integrated approach to diagnostics, capacity assessment and

maintenance applications and production, control and other manufacturing

Business applications for integration.

GB/T 27758.1 gives a summary of the rules and elements of the automated application integration requirements description method, as shown in Figure 1. These elemental packs

The key factors that include the integration of automation applications with other applications, and the relationship between these key factors. These rules include supporting a response

Exchange of information with interoperability between internal and multiple applications.

GB/T 27758.2 gives a detailed definition of the application of the interaction matrix elements (AIME) and application area matrix element (ADME) structure,

And the relationship between them. Specifically describes the steps to build ADME from a set of AIMEs.

This section GB/T 27758 defines a recommended method, the method is based on a template to describe two or more automated collar

Domain applications interoperability between these applications can be located in any one of the enterprise functional layer and resource layer. Mainly concerned with production operations and maintenance operations

field.

Figure 1 GB/T 27758 the relationship between the various parts

Unified Modeling Language (UML) is used to describe the information exchange requirements related to field application interoperability and integration, especially diagnostics, control,

Maintenance and production.

The purpose is focused on.

--- How to express the process, equipment, operators, materials and other automated assets-related information exchange;

How to state the exchange of information from control and production systems to various diagnostic and maintenance systems for asset management.

The expected advantage of describing the exchange of information lies in.

--- Facilitate the designation and access to open systems to support interoperability between diagnostic and maintenance applications;

Reduce the time to develop diagnostic and maintenance solutions that directly address well-defined integration needs;

--- Provides a set of tools to classify the tools used to achieve and verify interoperability and integration between applications.

Industrial Automation Systems and Integration

Diagnostics, proficiency assessment and maintenance application integration

Part 3. Application integration description methods

1 Scope

This part of GB/T 27758 defines the use of GB/T 27758.2 interoperability templates. These methods describe how to structure

Build and use Application Area Matrix Elements (ADMEs), Application Interaction Matrix Elements (AIMEs), and Open Technology Dictionaries (OTDs) to support information exchange.

This section also gives a specific description of the exchange of information between the two applications guidelines, through the definition of GB/T 27758.2 context, pass

Handbook and content describe the exchange of information.

This section GB/T 27758.1 and GB/T 27758.2 combined use.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

Industrial automation systems and integrated diagnostics, capability assessment and maintenance application integration - Part 1 GB/T 27758.1-2011.

General and general requirements (ISO 18435-1.2009, IDT)

Industrial automation systems and integrated diagnostics, capability assessment and maintenance application integration - Part 2 GB/T 27758.2-2015.

Fields of Application Matrix Elements Description and Definition (ISO 18435-2.2012, IDT)

ISO 8000 (all parts) Data quality (Dataquality)

ISO /IEC 10646 Information Technology-Universal Coded Character Set (UCS)
(Informationtechnology-Universalcoded
charset)

ISO 15745-1 Industrial automation systems and integrated open systems application integration framework Part 1. Common reference description (Industrial automation systems and integration-Open systems application integration framework-Part 1. Generic reference description)

ISO /T S29002 (all parts) Industrial automation systems and integration features Data exchange (Industrial automation systems and integration-Exchange of characteristic data)

ISO /T S29002-5.2009 Industrial automation systems and integration characteristics of data exchange - Part 5. Identification scheme (Industrial automation systems and integration-Exchange of characteristic data-Part 5. Identification scheme)

3 Terms and definitions

GB/T 27758.1 and GB/T 27758.2 defined by the following terms and definitions apply to this document.

3.1

Ontology ontology

The clear and consistent detailed rules of the application domain concept do not cover the use of concepts.