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

**GBZ 174-2006**

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**Industrial-process measurement, control and automation -  
Smart manufacturing - Part 1: Terms and definitions**

含发光涂料仪表放射卫生防护标准

**(English Translation)**

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## Table of Contents

|                                         |
|-----------------------------------------|
| Preface                                 |
| Introduction                            |
| 1 Scope                                 |
| 2 Normative References                  |
| 3 Terms, Definitions, and Abbreviations |
| 3.1 Terms and Definitions               |
| 3.2 Abbreviations                       |
| Reference                               |
| Index                                   |

## Foreword

This document is a report-type guidance technical document.

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is Part 1 of GB/Z 174 "Industrial Process Measurement Control and Automation - Intelligent Manufacturing". GB/Z 174 has been published.

The following section.

---Part 1: Terms and Definitions;

---Part 3: Challenges to Cybersecurity this document adopts IEC TR63283-1:2022 "Industrial process measurement, control and automation, intelligent manufacturing - Part 1: Terminology" the document type has been changed from an IEC technical report to a national standardization guidance technical document in my country.

The following minimal editorial changes have been made to this document.

--- An index has been added.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Machinery Industry Federation.

This document is under the jurisdiction of the National Technical Committee on

Standardization of Industrial Process Measurement, Control and Automation (SAC/TC124).

## Introduction

This document provides a glossary of terms related to intelligent manufacturing. It is not a complete glossary of intelligent manufacturing terms, but it contains a wider range of terms than this one.

More terms in other parts of the series.

Intelligent manufacturing is the core path to achieve digital transformation and intelligent upgrading in the field of industrial process measurement, control, and automation. To ensure...

To ensure the orderly application of intelligent manufacturing technologies, promote interconnection and collaborative development across the industry chain, and establish a scientific and applicable standard system.

This has become the primary task in carrying out related work. Among this series of standards, GB/Z 174 "Industrial Process Measurement Control and Automation - Intelligent Manufacturing" "Intelligent Manufacturing" is a general standard that guides fundamental work and applied practices in this field, aiming to establish the terminology foundation and typical application paradigms of intelligent manufacturing.

The analysis of the network security environment is planned to consist of three parts.

---Part 1: Terms and Definitions. The aim is to establish a unified language environment for the field of intelligent manufacturing and to contribute to international standards for intelligent manufacturing.

This provides a standardized terminology definition reference for understanding and industry applications.

---Part 2: Use Cases. The purpose is to organize and list application cases of major intelligent manufacturing technologies and systems, providing a basis for technology implementation and system deployment.

The system integration provides a practical example for reference.

---Part 3: Challenges to Cybersecurity. The aim is to analyze the security challenges faced by industrial production processes in the context of the current Internet of Things.

The comprehensive risk assessment provides a situational reference for the industry to formulate safety strategies and address challenges.

Industrial process measurement and control and automated intelligent manufacturing Part 1: Terms and Definitions

## 1 Scope

This document defines a comprehensive set of basic terms for intelligent manufacturing, as well as compatible terms related to the scope of intelligent manufacturing. Most terms...

The terminology references existing definitions within the fields of industrial process measurement, control, and automation, as well as their various subfields. When the same definition appears in different standards...

When multiple similar definitions exist for a term, this document includes only the preferred definition in the context of smart manufacturing. When existing definitions differ from those in this document...

When other terms are incompatible or not suitable for a broader definition of intelligent manufacturing, new or modified definitions will be given.

## 2 Normative references

This document has no normative references.

### 3.1 Terms and Definitions

The following terms and definitions apply to this document.

The URLs for the terminology databases maintained by ISO and IEC for standardization are as follows.

#### 3.1.1

template

A specification containing several sets of with common characteristics, which is detailed enough to be used to instantiate a certain .

**Note:** is anything that has a type.

[Source. GB/T 19659.1-2005, 3.33, with modifications] 3.1.2 Access the ability and means to communicate with the system or otherwise interact with it in order to use system resources.

**Note:** Access may involve physical access (physical authorization in a certain area, possession of physical encryption devices, PIN codes or access cards, or other permitted access).

Biometrics or logical access (authorization to log in to systems and applications through a combination of logical and physical methods).

[Source. GB/T 40211-2021, 3.2.1] 3.1.3 Access control Protect system resources from unauthorized access; the process of using system resources is governed by security policies, and only those resources are used in accordance with those policies.

Authorized entities (users, programs, processes, or other systems) are permitted.

[Source. GB/T 40211-2021, 3.2.2] 3.1.4 Accountability the system's attributes (including all its resources) ensure that the behavior of a system entity is traceable back to that unique entity, and that...