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GB/T 42199-2022

Intelligent manufacturing - Mass customization - Design requirement

智能制造 大规模个性化定制 设计要求

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Foreword

This document was issued on 30 December 2022 by the State Administration for Market Regulation; Standardization Administration of the PRC and takes effect on 1 July 2023.

It is a GB/T standard: recommended rather than compulsory, but it is the text a Chinese reviewer applies when assessing a submission.

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

drafting.

Please note that some contents of this document may refer to patents. The issuing agency of this document assumes no responsibility for identifying patents.

This document is proposed and managed by the Ministry of Industry and Information Technology of the People's Republic of China.

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Introduction

Mass customization is one of the five new models of intelligent manufacturing, and it has been successfully implemented in industries such as automobiles, home appliances, furniture, and clothing.

Practice, and as one of the important development directions, it has been researched and applied by domestic and foreign enterprises, system solution providers, and research institutions. Large scale

The series of standards for modular customization aims to sort out the common needs and core elements of large-scale customization in different industries, and standardize the

common

Large-scale personalized customization business process, puts forward the basic problems existing in key links such as demand interaction, design, and production compared with mass production mode.

To meet the basic requirements and promote the connection of all links in the life cycle. This series of standards is proposed to be composed of the following five standards.

--- "Terms of Mass Personalization in Intelligent Manufacturing" aims to standardize the basic terms and requirements in the field of mass customization

Interaction-related terms, design-related terms, production-related terms, etc.

--- "General Requirements for Mass Personalization in Intelligent Manufacturing" aims to standardize the business process and

Basic requirements for each activity.

--- "Intelligent Manufacturing Large-Scale Personalized Customization Requirements Interaction Requirements" aims to standardize the business process of large-scale personalized customization

Find the basic requirements for interactive activities.

--- "Design Requirements for Mass Personalized Customization in Intelligent Manufacturing" aims to standardize the design activities in the business process of mass personalized customization.

Basic requirements for movement.

--- "Production Requirements for Mass Personalized Customization in Intelligent Manufacturing" aims to standardize the production activities in the business process of mass personalized customization

Basic requirements for movement.

Intelligent manufacturing mass customization design requirements

1 Scope

GB/T 42199-2022 covers the design stage of a product that will be sold as a mass customized item - the basic principles, taking in the main content of the design work and the principles of modular design, and then the design process requirements: the process itself, product scheme design, product design, product verification, and the interactive updating of the module library. That last clause is where the model is kept alive. A customized product is not drawn from scratch for each order but configured out of a library of modules, and the library only goes on answering new requests if what is learned while designing and verifying products flows back into it; left static, it narrows into a short menu of

variants and the individual configuration that was promised quietly disappears. Fixing the design content, the modular design principles and a defined sequence running from scheme design through product design to verification also gives a buyer something concrete against which to judge a supplier's design capability, rather than a claim. Companion to the vocabulary GB/T 42134-2022 in the same mass customization series. Written for manufacturers moving to customized production and for the consultants, trainers and implementers working alongside them.

This document specifies the basic requirements and design process requirements for the design phase of mass personalized customization products in intelligent manufacturing.

This document is applicable to manufacturing enterprises and the personnel and institutions that provide consulting, training and implementation services for mass customization

product design.

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text. Among them, dated references

For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

this document.

GB/T 42202-2022 General requirements for mass customization of smart manufacturing

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1

customer customer

An organization or individual receiving a product or service.

[Source. GB/T 42134-2022, 3.2]

3.2

module module

A typical general-purpose independent unit with specific functions and standard interfaces that makes up a custom product or its internal subsystems.

[Source. GB/T 42134-2022,5.1]