ICS 03.080.10
CCS J 04

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 43880.2-2024

Service-oriented manufacturing - Guideline - Part 2: Basic mode

服务型制造 导则 第2部分：基本模式

Issued on: March 15, 2024 **Implemented on: October 1, 2024**

Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC

Table of Contents

1 Scope

The document lays down the classification of the basic modes of service-oriented manufacturing and the basic modes of service-oriented manufacturing themselves.

The document applies to the construction and the management of service-oriented manufacturing modes in manufacturing enterprises.

2 Normative references

The content of the documents listed forms indispensable provisions of this document through normative reference in the text. For dated references only the edition corresponding to that date applies; for undated references the latest edition, including all amendments, applies.

GB/T 43879-2024 Service-oriented manufacturing - General terminology; JB/T 12516 Modern manufacturing service industry - Equipment manufacturing industry - Terminology.

3 Terms and definitions

The terms and definitions defined in GB/T 43879-2024 and in JB/T 12516 apply to this document; no further terms are defined here.

4.1 Principles of classification

The classification of service-oriented manufacturing modes follows these principles: basic character, the elements of service-oriented manufacturing being used as the basis of the classification; general character, the classification reflecting the features common to service-oriented manufacturing; applicability, the classification meeting the practical needs of service-oriented manufacturing; and extensibility, the classification adapting to new needs and to new modes.

4.2 Basic classification

According to the composition of the elements of service-oriented manufacturing, the basic modes of service-oriented manufacturing are divided into the resource service mode, the process service mode, the product service mode, the management service mode and the integrated service mode; examples of the related service modes are given in Annex A. The classification of the service modes is as follows.

Resource service mode: the mode in which the manufacturing enterprise provides the customer directly, as a service, with resources such as premises, equipment, software or platforms, funds, personnel and knowledge.

Process service mode: the mode in which the manufacturing enterprise provides services for particular processes such as product design, process design, purchasing, manufacturing, sales, product operation and maintenance, and product recovery and remanufacturing.

Product service mode: the mode in which the manufacturing enterprise provides the customer with related services on the basis of selling or leasing a product.

Management service mode: the mode in which the manufacturing enterprise provides services for the planning and control, the co-ordination and the optimization of resources, processes and products.

Integrated service mode: the mode in which the manufacturing enterprise combines resource service, process service, product service and management service.

5.1 System of service-oriented manufacturing modes

The system of service-oriented manufacturing modes is made up of the resource service mode, the process service mode, the product service mode, the management service mode and the integrated service mode. The process service mode is formed on the basis of resource services within the life cycle of a particular product; the product service mode is formed on the basis of process services such as product design and manufacturing; the management service mode is formed on the basis of the co-ordinated optimization of resource, process and product services; and the integrated service mode is formed by combining services of the different types, that is resource, process, product and management. The system of service-oriented manufacturing modes is shown in Figure 1.

5.2 Resource service mode

5.2.1 Overview. The resource service mode is made up of the manufacturing enterprise as service provider, the service resource pool, and the customer as service user.

5.2.2 Content and relationships. The manufacturing enterprise uses the service resource pool to provide the customer with various service resources, which the customer can choose and use as needed. Service providers include parts suppliers, process providers, packaging suppliers and collaborative design enterprises. The service resource pool includes hardware resources, software resources, material resources, data resources, human resources, service resources and financial resources. The framework of the resource service mode is shown in Figure 2.

5.2.3 Typical applications. The resource service mode includes, but is not limited to, the following services: equipment leasing services, in which the manufacturing enterprise leases to the customer equipment it has produced itself or bought from an equipment maker; premises leasing services, in which the manufacturing enterprise leases to the customer factory buildings, warehouses and other premises; data resource services, in which the manufacturing industry provides the customer with data sharing services in the form of files, interfaces, databases and the like; human resource services, in which the manufacturing industry provides the customer with human resource services in the form of technical support, personnel recommendation, training and the like; and other services.

5.3 Process service mode

5.3.1 Overview. The process service mode is set out according to the whole life cycle of the product.

5.3.2 Content and relationships. The manufacturing enterprise packages processes such as product design, process design, purchasing, manufacturing, inventory, logistics, sales, product operation and maintenance, and product recovery and remanufacturing into

services of various kinds, from which the customer can choose a particular specialized service directly. The manufacturing enterprise can combine and optimize the various services to form a fixed combined service, or can combine outsourced services in a customized way according to the customer needs, so that the service is more flexible and better suited to the customer. The framework of the process service mode is shown in Figure 3, with the note that the customer can keep only the core business processes and have all the others carried out by outsourcing.

5.3.3 Typical applications. The process service mode includes, but is not limited to, the following services: product design services, covering the structure, external form, function and performance of the product; process design services, providing the customer with a process design scheme covering the processing methods, the processing stages and the processing equipment; purchasing services, in which purchasing consultancy, enquiry and quotation, supplier inspection and logistics management are carried out so as to purchase suitable products or services for the customer; logistics services, providing the customer with the transport and delivery of raw materials, work in progress, semi-finished products and products; manufacturing services, providing the customer with all or part of the production and processing of a product; testing services, the testing and inspection activities carried out by a testing service provider, including third party testing bodies, to establish whether raw materials, parts and products meet the specified requirements; certification services, the conformity assessment activities carried out by a certification body to certify that products, services and management systems conform to the relevant standards, technical specifications or mandatory requirements; after sales services, providing the customer with product installation and commissioning, fault diagnosis, maintenance and repair, technical support and the like; and other services.

5.4 Product service mode

5.4.1 Overview. The product service mode is made up of the manufacturing enterprise as service provider, the product, and the customer as service user.

5.4.2 Content and relationships. While selling or leasing the product, the manufacturing enterprise provides product service support so that the product can be used normally. Through remote support services the manufacturing enterprise can obtain the operating data of the product in good time, look for and find hidden perils in the product, notify the customer promptly and on its own initiative, and provide remote guidance for the maintenance and repair of the product. The framework of the product service mode is shown in Figure 4.

5.4.3 Typical applications. The product service mode includes, but is not limited to, the following services: product operation and maintenance services, providing the customers who have bought the products of the manufacturing enterprise with operation monitoring, spot inspection, fault diagnosis, maintenance and repair, on site or remotely; product