

CCS N 10



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

GB/T 35132.3-2020

**Automation system and integration. Assessment of energy efficiency and other
environmental impact factors in manufacturing systems - Part 3: Data
aggregation process for environmental performance evaluation**

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Foreword

GB/T 35132 "Assessment of energy efficiency and other environmental impact factors of automation systems and integrated manufacturing systems" is divided into the following parts.

- Part 1.Overview and general rules;
- Part 2.Environmental performance evaluation process;
- Part 3.Environmental performance evaluation data aggregation process;
- Part 4.The allocation and loading process of indirect impact and CRR impact;
- Part 5.Environmental performance evaluation data.

This part is Part 3 of GB/T 35132.

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

The translation method used in this part is equivalent to ISO.20140-3.2019 "Energy efficiency of automation systems and integrated manufacturing systems and other

Assessment of environmental impact factors. Part 3.Environmental performance assessment data aggregation process."

The Chinese documents that have a consistent correspondence with the international documents cited in this section are as follows.

---GB/T 35132.1-2017 Assessment of energy efficiency and other environmental impact factors of automation systems and integrated manufacturing systems

Assessment Part 1.Overview and general rules (ISO.20140-1.2013, IDT).

Please note that certain contents of this document may involve patents. The issuing agency of this document is not responsible for identifying these patents.

This part was proposed by China Machinery Industry Federation.

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

Drafting organizations of this section. Beijing Machinery Industry Automation Research Institute Co., Ltd., Zhejiang University, Tongji University, Jiangsu Changjiang Intelligent Manufacturing Research Institute

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Introduction

GB/T 35132 specifies methods for evaluating the energy efficiency of manufacturing systems and other environmental impact factors, such as energy consumption, losses and emissions.

GB/T 35132 can be used for discrete manufacturing, batch manufacturing and continuous manufacturing manufacturing systems.

GB/T 35132 focuses on a hierarchical manufacturing system.

GB/T 35132 can be used for.

---As a benchmark to measure the environmental performance of a general reference manufacturing system, or to compare the environmental performance of two different manufacturing systems;

--- Alternative research to improve environmental performance;

---Set environmental performance improvement goals;

---Visually show the environmental performance of the running manufacturing system.

The intended users of GB/T 35132 include.

---The manager responsible for the environmental conditions of the manufacturing system;

---Engineers who design product manufacturing processes;

---Engineers designing and manufacturing systems;

---Engineers and supervisors responsible for manufacturing products.

Automation system and integrated manufacturing system energy

Evaluation of efficiency and other environmental impact factors

Part 3.Environmental performance evaluation data aggregation process

1 Scope

This part of GB/T 35132 specifies an aggregation process that uses environmental

performance evaluation based on GB/T 35132.5

Data, according to the given environmental performance evaluation specifications of GB/T 35132.2, provide aggregated environmental performance evaluation data.

This section does not specify any specific aggregation process specifically implemented by the manufacturing system.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article

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

ISO.20140-1 Assessment of energy efficiency and other environmental impact factors of automation systems and integrated manufacturing systems Part 1.Overview and general principles

3 Terms and definitions

The following terms and definitions defined by ISO.20140-1 apply to this document.

ISO and IEC maintain a terminology database for standardization at the following website.

3.1

Aggregated environmental performance evaluation data

Aggregated EPE data

Given the type and mode of environmental impact, the value of the environmental impact (3.4) caused by the manufacturing process (3.8) is expressed.

Note. The aggregated EPE data is the total value of the converted EPE data (3.3) related to each component activity (3.2) involved in a given manufacturing process.

[Source. GB/T 35132.2-2020, definition 3.1, note added]

3.2

Compose activity

A part of a given manufacturing process (3.8) is identified by a piece of equipment used and a specific period of time.

3.3

EPE data after conversion

A numerical representation of a specific type of environmental impact (3.4) caused by a specific component activity (3.2) in a specified mode.

3.4

environmental impact

The result of a manufacturing process (3.8) that can cause environmental effects and be considered in the entire life cycle of the manufacturing system related to the process.