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

GB/T 36290.1-2020

**Process diagrams for power plants - Part 1: Specification for
diagrams**

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Foreword

GB/T 36290 "Flowchart of Power Station" is divided into two parts.

---Part 1. Drawing specifications;

---Part 2. Graphical symbols.

This part is Part 1 of GB/T 36290.

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

The translation method used in this section is equivalent to the use of ISO 14084-1.2015 "Plant Flow Chart Part 1. Drawing Specifications".

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

---GB/T 20063 (all parts) Graphic symbols for the sketch [ISO 14617 (all parts)].

The following editorial changes have been made in this section.

---Information cited documents in the text are included in the reference;

--- 4.2 added footnotes.

This standard was proposed by the China Electricity Council.

This part is under the jurisdiction of the National Power Station Process Monitoring and Information Standardization Technical Committee (SAC/TC376).

This section was drafted by. General Electric Power Planning Co., Ltd., State Power Investment Group Co., Ltd., China Datang Group Co., Ltd.,

Huadian Shaanxi Energy Co., Ltd., CNNC Wuhan Nuclear Power Operation Technology Co., Ltd., China Energy Construction Group Planning and Design Co., Ltd.,

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0.1 Overview

This part is related to the preparation work of the power station flow chart.

The drawing standards including graphic symbols in GB, ISO, and IEC together form the basis of the process industry drawing preparation work.

The relationship between these standards is shown in Figure 1.

Note. The standards marked with * are common application standards.

Figure 1 Correlation between ISO, IEC and GB drawing standards for power plants

0.2 Common application standards

The following standards.

---ISO 15519 series. process industry drawing specifications;

---ISO 14617 series. Graphical symbols for diagrams.

All belong to the general basic standards applicable to all application fields. Technical committees in various specialized application areas are allowed to add

Refine, and publish the corresponding standard as the common application standard of ISO 15519 series, ISO 14617 series or both.

0.3 Application area

This section applies to the field of power stations, including various types of conventional fossil fuel power stations, biomass fuel power stations, hydropower stations, sea wave energy power stations, wind power

Power stations, nuclear power stations, geothermal power stations, solar power stations,

osmotic pressure power stations, waste incineration power stations and industrial power stations.

0.4 Figure

The diagrams in this section are only examples to illustrate the given rules.

0.5 Reference mark

In this section, ISO /T S16952-10 is used to explain the rules and guidelines for the use of reference signs in power plant flowcharts.

Appendix C gives a summary of ISO /T S16952-10.

Note. When using other reference identification systems, their application in the figure needs to be explained in the same way.

Power station flow chart Part 1. Drawing specifications

1 Scope

This part of GB/T 36290 specifies the types of power plant flow charts, and the rules for preparing and expressing information in the corresponding types of flow charts

And guide.

This part belongs to the common application standard of ISO 15519 series.

This section does not apply to electrical technical drawings covered by IEC 61082 and hydraulic drawings covered by ISO 1219-2.

2 Normative references

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

Pieces. For the cited documents without date, the latest version (including all amendments) applies to this document.

Terms of ISO 10209 technical product documents and technical drawings, product definitions and related documents (Technical

productdocumentation-Vocabulary-Termsrelatingtotechnicaldrawings,productdefinitionand relateddocumentation)

ISO 14617 (all parts) Graphic symbols for graphs (Graphicalsymbolsfordiagrams)

ISO 15519 (all parts) Specification for process industrial drawing (Specificationfordiagrams for process industry)

3 Terms and definitions

The terms and definitions defined by ISO 15519 (all parts) and ISO 10209 and the following apply to this document.

3.1

Block diagram; BLD

An overview drawing mainly using box symbols.

Note. Rewrite ISO 10209:2012, definition 11.16.

3.2

Process flow diagram process flow diagram; PFD

A diagram that describes the composition of a process system or process plant through graphical symbols.

Note. Rewrite ISO 10209:2012, definition 11.126.

3.3

Process and instrumentation diagram process and instrumentation diagram; PID

Through the equipment, process flow path, process measurement and control function graphic symbols to represent the process system technology diagram.

Note. The process and instrument drawing types used in this section are technically the same as pipeline and instrument drawings. The reason why this part identifies the drawing name

The change is due to the use of this document type in the processing of fluids and solid materials in the field of power plants. Abbreviations for process and instrumentation diagrams in this section

Use PID to distinguish it from the traditional abbreviation P used in pipelines and instrumentation diagrams

3.4

Process control diagram process control diagram; PCD

Diagram showing the configuration of measurement, control, and execution functions of a system or subsystem.