

ICS 01.100.20

CCS J 04



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

GB/T 4458.1-2002

**Mechanical drawings -- General principles of presentation --
Views**

(English Translation)

Issued on: September 6, 2002

Implemented on: April 1, 2003

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China**

Table of Contents

Foreword...	3
1 Scope...	5
2 Normative References...	5
3 Terms and Definitions...	6
4 Basic Requirements...	6
5 Representation Methods of the View...	6
5.1 Partial views...	6
5.2 Adjacent auxiliary parts and specific areas...	8
5.3 Intersection lines on surface...	8
5.4 Drawing method of plane...	10
5.5 Drawing method of fracture...	10
5.6 Repeated structural elements...	11
5.7 Partial enlarged drawing...	12
5.8 Initial contour...	14
5.9 Bent line...	14
5.10 Structure with smaller tilt and taper...	15
5.11 Transparent part...	15
5.12 Moving part...	16
5.13 Finished part and blank...	17
5.14 Finished part with separated identical elements...	17
5.15 Mesh structure...	17
5.16 Fiber orientation...	18
5.17 Representation of two or more identical views in a part drawing...	18
5.18 Mirrored part...	19
6 Simplified Drawing Method...	19

Foreword

This Part is one of the series national standards of Mechanical Drawings - General Principle

of Presentation. The projected structure of these national standards, their corresponding national standards, and the national standards they replace are listed as follows.

- GB/T 4457.4-2002 Mechanical Drawings - General Principles of Presentation - Lines (ISO 128-24, replacing GB/T 4457.4-1984)
- GB/T 4458.1-2002 Mechanical Drawings - General Principles of Presentation - Views (ISO 128-34, replacing GB/T 4458.1-1984)
- GB/T 4458.6-2002 Mechanical Drawings - General Principles of Presentation - Sections (ISO 128-44, replacing GB/T 4458.1-1984 [Translator Note. here it shall be GB/T 4458.6-1984])

This Part corresponds to ISO 128-34:2001 Technical Drawings - General Principles of Presentation - Part 34: Views on Mechanical Engineering Drawings (English Version). This Part is modified and adopted by the consistency degree with ISO 128-34:2001, with the main differences as follows.

- Add a new Clause 4 Basic Requirements; and include relevant content into the description of this Clause;
- Supplement and improve the relevant content of 5.7 "Partial Enlarged Views";
- Rearrange the clauses and subclauses of the standard.

This Part replace the content related to "view drawing" in GB/T 4458.1-1984 Mechanical Drawings - Representation of Drawings.

Compared with GB/T 4458.1-1984, the major changes of this Part are as follows.

- The basic representation methods for "basic views," "directional views," and "oblique views" are detailed in GB/T 17451-1998 Technical Drawing - General Principles of Presentation - Views; and this Part only provides note date references and supplements;
- Delete the "rotate views";
- Add the format of partial views using third-angle projection;
- Mark the line types for drawing;
- Imagine intersection lines have been changed from thick solid lines to thin solid lines (01.1 line type);

Mechanical Drawings - General Principles of Presentation -
Views

1 Scope

This Part specifies the methods of view representation.

This Part applies to technical drawings created in mechanical drawing using orthographic projection (see GB/T 14692).

Unless otherwise specified, the drawing methods specified in this Part are first-angle projections.

2 Normative References

The provisions in following documents become the provisions of this Part through reference in

this Part of GB/T 4458. For dated references, the subsequent amendments (excluding corrigendum) or revisions do not apply to this Part, however, parties who reach an agreement

based on this Part are encouraged to study if the latest versions of these documents are applicable. For undated references, the latest edition of the referenced document applies.

GB/T 4458.4 Mechanical drawings - Dimensioning (neq ISO 129)

GB/T 10609.4 Technical drawings - Requirements for microcopying (neq ISO 6428)

GB/T 13361 Technical drawings - General terms (neq ISO 10209-1)

GB/T 14692 Technical drawings - Projection methods (neq ISO 5456)

GB/T 16675.1 Technical drawings - Simplified representation - Part 1. Pictorial presentation

GB/T 16948 Technical product documentation - Vocabulary - Terms relating to projection methods (eqv ISO 10209-2)

GB/T 17450 Technical drawings - Basic conventions for lines (idt ISO 128-20)

GB/T 17451-1998 Technical drawings - General principles of presentation - Views

GB/T 4457.4-2002 Mechanical drawings - General principles of presentation - Lines (ISO 128-24, Technical drawing - General principles of presentation - Part 24. Lines on mechanical engineering drawing, MOD)

3 Terms and Definitions

For the purposes of this Document, the terms and definitions given in GB/T 13361 and GB/T

4.1 GB/T 17451 is the basis of this Part; and this part supplements GB/T 17451. The basic

representation methods for basic views, directional views, partial views, and oblique views are

given in GB/T 17451.

4.2 The lines used to draw views shall conform to the provisions of GB/T 17450 and GB/T

4457.4.

4.3 Views requiring microform reproduction shall be drawn in accordance with the

requirements of GB/T 10609.4.

5.1.1 In mechanical drawing, partial views may be configured in the following ways.

- Configured in the same manner as basic views, see the top view in Figure 1;
- Configured in the same manner as directional views, see Figure 2;
- Configuring in the view as per the third angle projection (see GB/T 14692) is required to represent the place near the object structure; and connect the two with a thin dash-dot line (No.04.1 line type), as shown in Figures 3 ~ 6.

5.1.2 When drawing partial views, the fracture boundary is drawn with a wavy line (No.01.1

line type) or a double-broken line (No.01.1 line type), as shown in the top view in Figure 1 and

the A-directional view in Figure 2. When the outer contour of the represented partial view is closed, it is not necessary to draw its fracture boundary line, as shown in the B-directional view

in Figure 2 and Figure 38.