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

GB/T 39542.1-2020

**Mechanical pencils for technical drawings - Part 1:
Classification, dimensions, performance requirements and
testing**

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Foreword

GB/T 39542 "Technical Drawing Mechanical Pencil" is divided into three parts.

---Part 1.Classification, size, performance requirements and tests;

---Part 2.Classification and size of black lead core;

---Part 3.Black lead core HB lead core bending strength.

This part is Part 1 of GB/T 39542.

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 the ISO 9177-1.2016 ``Technical Drawing Mechanical Pencil Part 1.Classification, Dimensions, Performance Requirements

Summation Test.

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

---GB/T 17450-1998 technical drawing line (ISO 128-20.1996, IDT);

---GB/T 39542.2-2020 Technical drawing mechanical pencil Part 2.Black lead core classification and size (ISO 9177-2.1989, IDT).

This part was proposed by the China National Light Industry Council.

This part is under the jurisdiction of the National Pen Making Standardization Technical Committee (SAC/TC378).

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Group Co., Ltd., Wenzhou Hobby Pen Co., Ltd., Yiwu Meineng Pen Co., Ltd.

1 Scope

This part of GB/T 39542 specifies the classification, size, performance requirements and test methods of mechanical pencils for technical drawing.

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 document.

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

ISO 128-20 General principles of technical drawings. Part 20. Drawings

ISO 9177-2 Mechanical Pencil Part 2. Classification and Size of Black Lead

3 Terms and definitions

The following terms and definitions apply to this document.

3.1

Mechanical pencil

A hand-held writing tool that can hold and output lead cores for writing or drawing.

4 categories

Mechanical pencils should be classified according to mechanical structure type (see Table 1) and nominal diameter (see Table 2). For the classification and size (diameter and length) of the lead core, see ISO 9177-2.

Table 1 Classification by mechanical structure type