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GB/T 239.1-2023 / ISO 7800:2012

Replacing GB/T 239.1-2012

Metallic Materials – Wire – Part 1: Simple Torsion Test

(ISO 7800:2012, Metallic Materials – Wire – Simple Torsion Test, IDT)

金属材料 线材 第 1 部分：单向扭转试验方法

Issued on: March 17, 2023 **Implemented on: October 01, 2023**

Issued by: State Administration for Market Regulation;

Standardization Administration of the People's Republic of China.

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Foreword

This Document was drafted as per the rules specified in GB/T 1.1-2020 *Directives for Standardization – Part 1: Rules for the Structure and Drafting of Standardizing Documents*.

This Document was Part 1 of GB/T 239 *Metallic Materials – Wire*. GB/T 239 has published the following parts:

--- Part 1: Simple Torsion Test;

--- Part 2: Reverse Torsion Test.

This Document replaced GB/T 239.1-2012 *Metallic Materials – Wire – Part 1: Simple Torsion Test*. Compared with GB/T 239.1-2012, the major technical changes of this Document are as follows besides the structural adjustments and editorial modifications:

--- Increase the typical special-shaped wire type diagram and the free length requirements between the clamps (see Figure 2 and Table 3 of this Edition);

--- Change the maximum free length between clamps of round wire (see Table 2 of this Edition; Table 2 of the 2012 Edition);

--- Change the free length between the special-shaped wire clamps (see Table 3 of this Edition; Table 2 of the 2012 Edition).

This Document equivalently adopts ISO 7800:2012 *Metallic Materials – Wires – Simple Torsion Test*.

This Document adds the clauses of “Normative References” and “Terms and Definitions”.

This Document made the minimum editorial modifications:

--- To keep consistent with the current standard, change the standard name into *Metallic Materials – Wires – Part 1: Simple Torsion Test*.

--- To distinguish clamp and specimen more clearly, the key “2 – specimen” is added to the Figure 1;

--- For the convenience of use, sub-map titles have been added in Figure 2; and the center line has been added for the "T-shaped" standard drawing;

--- Add "NOTEs" in Clause 5 and 9.1;

--- Add "three-jawed clamp" in the diameter range "3≤d (h)≤10" of the tooth surface type in Table A.1.

Please note some contents of this Document may involve patents. The issuing agency of this

Document shall not assume the responsibility to identify these patents.

This Document was proposed by China Iron and Steel Association.

This Document shall be under the jurisdiction of National Technical Committee on Steel of Standardization Administration of China (SAC/TC 183).

Drafting organizations of this Document: Guangzhou Customs District Technology Center; Center of Excellence for Advanced Materials; Shandong Xindadi Holding Group Co., Ltd.; Guangzhou Shipyard International Company Limited; Nantong Products Quality Supervision & Inspection Institute; Zhejiang Guojian Testing Technology Co., Ltd.; Shanghai Shenli Testing Machine Company; Jinan Zhongchuang Testing System Co., Ltd.; China Metallurgical Information and Standardization Institute; and Wuhan Huatuo Measurement Technology Co., Ltd.

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The historical editions replaced by this Document are as follows:

--- GB/T 239-1963 *Metallic Materials Wire Torsion Test* was first-time published in 1963; first-time revised in 1982; second-time revised in 1984; and third-time revised in 1999;

--- It is divided into parts to be published during the fourth-time revision in 2012; this Document corresponds to GB/T 239.1-2012 *Metallic Materials – Wire – Part 1: Simple Torsion Test*.

--- It is the fifth-time revised hereby.

Metallic Materials – Wire – Part 1: Simple Torsion Test

1 Scope

This Document specifies a method for determining the ability of metallic wire of diameter or characteristic dimension from 0.1 mm to 14 mm to undergo plastic deformation during simple torsion in one direction.

After negotiation between relevant parties, the simple torsion test of metallic wire products of other specifications can be carried out with reference to this Document.

2 Normative References

There are no normative references in this Document.

3 Terms and Definitions

For the purposes of this Document, there are no terms and definitions apply.

4 Symbols and Designations

The symbols and designations used in this Document are shown in Figures 1 and 2, and Table 1.

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