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

GB/T 31930-2015

**Metallic materials -- Ductility testing -- Compression test for
porous and cellular metals**

金属材料 延性试验 多孔状和蜂窝状金属压缩试验方法

(English Translation)

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Foreword

This Standard is drafted according to the rules given in GB/T 1.1-2009.

This Standard uses the translation method to equivalently adopt ISO 13314.20011

"Mechanical testing of metals - Ductility testing - Compression test for porous and cellular metals" (English version).

China's national documents that have consistency correspondence relation with the normative-reference international documents in this Standard are as follows.

- GB/T 12160 Metallic materials - Calibration of extensometers used in uniaxial testing (ISO 9513.1999, IDT);
- GB/T 16825.1 Metallic materials - Verification of static uniaxial testing machines - Part 1. Tension/compression testing machines - Verification and calibration of the force-measuring system (GB/T 16825.1-2008, ISO 7500-1.2004, IDT).

This Standard has the following editorial modifications.

- In order to be consistent with the existing standards, the standard name is changed as "Metallic materials - Ductility testing - Compression test for porous and cellular metals";

- In order to facilitate the use of the symbols in the standard, the Clause 5 "Symbols and descriptions" is added, subsequent clauses and articles shall be followed.

This Standard is proposed by China Iron and Steel Association.

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

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Metallic materials - Ductility testing - Compression
test for porous and cellular metals

1 Scope

This Standard specifies a test method for compressive properties of porous and cellular metals with a porosity of 50 % or more. Compressive tests can be carried out at ambient temperature under quasi-static strain rate conditions.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 7500-1 Metallic materials - Verification of static uniaxial testing machines - Part

1 Tension/compression testing machines - Verification and calibration of the force-

measuring system

ISO 9513 Metallic materials - Calibration of extensometers used in uniaxial testing

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

compressive stress

The ratio of the actual compressive force (F) applying to the specimen during the test TO the initial cross-sectional area (S₀).

NOTE: Compressive stress is expressed in newtons per square millimeter (N/mm²).

3.2

compressive strain

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