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

中华人民共和国国家标准

GB/T 16865-2013

Replace GB/T 16865-1997

**Test pieces and method for tensile test for
wrought aluminium and magnesium alloys
products**

变形铝、镁及其合金加工制品拉伸试验用试样及方法

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Foreword

This standard is drafted in accordance with rules provided in GB/T 1.1—2009.

This standard replaces GB/T 16865—1997 “Test Pieces for Tensile Test for Wrought Aluminum and Magnesium Alloys Products”. Compared with GB/T 16865—1997, major technical changes are as follows:

- Deleting round test pieces that original d_0 is 14 mm;
- Increasing round standard test pieces that d_0 is 15 mm, 10 mm, 6.25 mm, 5mm and 3mm;
- Deleting gauge length fixed rectangular test pieces that original L_0 is 50 mm and 100 mm;
- Increasing gauge length fixed rectangular standard test pieces that L_0 is 50 mm and 80 mm.
- Increasing short-proportion and long-proportion rectangular standard test pieces that b_0 is 15 mm;
- Increasing content of test method.

This standard uses redraft method and refers to ASTM B 557M-2010 “Tensile Test Method for Wrought and Casting Aluminum and Magnesium”; degree of consistency with ASTM B 557M-2010 is non-equivalent.

This standard is under the jurisdiction of National Standardization Technical Committee of Nonferrous Metals (SAC/TC 243).

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Previous versions that this standard replaces are as follows:

——GB/T 16865—1997.

Test Pieces and Method for Tensile Test for Wrought Aluminum and Magnesium Alloys Products

1 Scope

This standard applies to terms and definitions, method overview, test piece and test method, test results and test reports of tensile test for wrought aluminum and magnesium alloys products at room temperature.

This standard applies to test pieces and method for tensile test for wrought aluminum and magnesium alloys plates, strips, foils, tubes, rods, wire and forgings at room temperature.

2 Normative references

The articles contained in the following documents have become this document when they are quoted herein. For the dated documents so quoted, all the modifications (Including all corrections) or revisions made thereafter shall be applicable to this document.

GB/T 8170 Rules of rounding off for numerical values & expression and judgement of limiting values

GB/T 10623 Metallic material - Mechanical testing - Vocabulary

GB/T 12160 Calibration of extensometers used in uniaxial testing

GB/T 16825.1 Verification of static uniaxial testing machines - Part 1 :
Tension/compression testing machines - Verification and calibration of the
force-measuring system

GB/T 22638.1 Test methods for aluminium and aluminium alloy foils - Part 1:
Determination of thickness by gravimetric method

3 Terms and definitions

For the purpose of this standard, the following Terms and definitions defined in GB/T 10623 apply.

4 Method overview

Apply axial tensile force on test piece (as shown in figure 1) to measure one or several mechanical properties of tensile strength of material, stipulated non-proportional

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