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

GB 5258-1985

Replacing GB/T 5258-1995

**Fiber-reinforced plastic composites -- Determination of
compressive properties in the in-plane direction
(English Translation)**

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Foreword

This revised standard adopts ISO 14126:1999 (E) "fiber reinforced plastic surface compression performance test methods" and ISO 14126:1999 (E) compared to the major differences are.

--- Jig listed in ISO 14126 is divided into A, B, C three types;

--- ISO 14126 specifies two test methods, this standard applies corresponding to three fixtures and test methods for material to be divided into three;

--- According to Chinese customs for some formatting has been modified.

This standard and ISO 14126. structural differences 1999 (E) in Appendix A.

This standard replaces GB/T 5258-1995 "fiber reinforced plastic lamellae compression performance test methods." the main changes compared to 5258-1995 standard and GB/T as follows.

--- Standard name from "fiber reinforced plastic lamellae compression performance test methods" to "fiber reinforced plastic surface compression performance test method";

--- Modify loading jig, according to the level of the measured material properties into three categories (GB/T 5258-1995 of 5.2, 5.4 of this standard);

--- Modify the sample size and shape (GB/T 5258-1995 of 6.1, 6.1 of this standard);

--- On both sides of the specimen strain readings to quantify the degree of consistency of provision (see 8.4);

--- Increase the ISO 14126 standard structural differences table (see Appendix A).

Appendix A of this standard is an informative annex.

The standard proposed by China Building Materials Federation.

This standard by the national fiber-reinforced plastic Standardization Technical Committee.

Drafting of this standard. Shanghai FRP Research Institute.

Participated in the drafting of this standard. Aerospace Materials & Technology Research Institute.

1 Scope

This standard specifies the principles of fiber reinforced plastics performance test method for compressing the inner surface of the test device, specimen, environmental conditions, test step Suddenly, the results of simulation and test reports.

This standard applies to the determination of fiber reinforced plastic surface compressive strength, compressive modulus, secant compressive modulus, the maximum compressive strain, pressure Compressive stress - strain curve.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 1446-2005 fiber reinforced plastics General performance test method

3 Terms and Definitions

The following terms and definitions apply to this standard.

The specimen can withstand the maximum compressive stress.

Compressive strain at failure, expressed as a percentage.

Compressive stress - strain curve of the line segment in the proportional limit slope.

Compressive stress - strain curve between the origin of a particular point of connection with the slope, called the compression point secant modulus.

Principle 4

The sample can be avoided by instability, and the end to prevent the specimen eccentric compression clamp squeezing destruction axial load is applied to the sample in the sample work Compressed segment for damage, record load and strain test area (or distortion), you can find the required compression performance.

5.1 Testing Machine

According to GB/T 1446-2005 specified in chapter 5.

5.2 Strain measurement device

Strain gauge or by measuring strain extensometer. Gage wire gate length should not exceed 3mm. Strain shows the relative error does not exceed $\pm 1\%$, with a strain to the recording apparatus.