

JIS

JAPANESE INDUSTRIAL STANDARD

**Test method for fatigue properties
of fiber reinforced metals**

JIS H 7408—1994

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Test method for fatigue properties
of fiber reinforced metals

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1. Scope This Japanese Industrial Standard specifies the method for partially pulsating tensile load fatigue test, which is carried out in the atmosphere at room temperature, of metal matrix composite reinforced by filaments.

Remarks: The following standards are cited in this Standard:

JIS B 7502 Micrometer callipers for external measurement

JIS B 7507 Vernier, dial and digital callipers

JIS G 0202 Glossary of terms used in iron and steel (testing)

JIS G 3101 Rolled steel for general structure

JIS H 7006 Glossary of terms used in metal matrix composites

JIS R 6252 Abrasive papers

JIS Z 2273 General rules for fatigue testing of metals

2. Definitions For the main terms used in this Standard, the definitions in JIS G 0202, JIS H 7006 and JIS Z 2273 apply, and the rest of the terms are as follows:

- (1) adhesive-bonded type Is a type wherein tabs are adhered to the grip section of a test piece with adhesive.
- (2) diffusion-bonded type Is a type wherein tabs are adhered to the grip section of the test piece by diffusion bonding.

3. Testing apparatus

3.1 Fatigue testing machine The fatigue testing machine shall be as specified in 4. of JIS Z 2273.

3.2 Gripping device The gripping device shall be so constructed as not to generate slippage between the test piece and the grip section in testing, and besides its in-plane and out-of-plane alignments shall be secured within $\pm 2^\circ$ angle in the loading direction.

3.3 Measuring tools The measuring tools shall be as follows:

- (1) Micrometer Micrometer of 0 mm to 25 mm in measuring range and 0.01 mm in minimum reading which is specified in JIS B 7502 or that at least equal thereto in measuring precision shall be used.
- (2) Vernier calliper Vernier calliper of 300 mm in maximum measuring length and 0.05 mm in minimum reading which is specified in JIS B 7507, or that at least equal thereto in measuring precision shall be used.