JIS

JAPANESE INDUSTRIAL STANDARD

Testing method for Charpy impact strength of glass fiber reinforced plastics

JIS K 7061-1992

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by

Japanese Standards Association

In the event of any doubt arising,
the original Standard in Japanese is to be final authority.

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Testing method for Charpy impact strength   K 7061-1992
of glass fiber reinforced plastics

1. Scope

This Japanese Industrial Standard specifies the method for Charpy impact test (hereafter referred to as an impact test) of glass fiber reinforced plastics (hereafter referred to as GFRP).

Remarks 1.   The test by this method is a type of impact bending test. The test is as follows: When the center of the specifically sized test piece, which has been held as a simply supported beam, is impacted at specified speed and with a specified energy that is larger than that required for fracture, the energy needed for its fracture by impact shall be measured, and then such as impact resistance, brittleness, and toughness of the test piece, GFRP, shall be measured.

2.   The Standards cited in this standard are as follows.

JIS B 7502-Micrometer Callipers for External Measurement

JIS B 7507-Vernier Callipers

JIS B 7739-Pendulum-Type Impact Testing Machines for Non-Metallic Materials

JIS K 6900-Glossary of Terms Used in Plastic Industry

JIS K 7011-Glass Fibre Reinforced Plastics for Structural Use

JIS K 7100-Standard Atmospheres for Conditioning and Testing of Plastics

JIS Z 8401-Rules for Rounding off of Numerical Values

3.   The units put in { } in this standard are based on conventional units and appended as only reference.

2. Definition of terms

The definition of main terms used in this standard shall be as follows except those defined in JIS K 6900.

(1)   Charpy impact test   The test to measure Charpy impact value by the operation as follows: Hold horizontally both ends of a test piece on two test-piece supporting bases separated by specified distance, give an impact to the center of the test piece held between bases by the hammer of an impact machine and fracture it by one blow.

(2)   absorbed energy   The energy needed to fracture a test piece (J) {kgf·cm}.

(3)   Charpy impact value   The value (kJ/m²){kgf·cm/cm²} obtained by dividing an absorbed energy (J){kgf·cm} with original central sectional area of the test piece.