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In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

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Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of Economy, Trade and Industry, through deliberations at the Japanese Industrial Standards Committee according to the proposal of establishing a Japanese Industrial Standard submitted by the Japan Reinforced Plastics Society (JRPS)/the Japan Plastics Industry Federation (JPIF)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law.

Consequently, **JIS K 7054** : 1995 and **JIS K 7073** : 1988 are withdrawn and replaced with this Standard.

Attention is drawn to the possibility that some parts of this Standard may conflict with a patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have technical properties. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have the said technical properties.

Plastics—Determination of tensile properties—Part 5 : Test conditions for unidirectional fibre-reinforced plastic composites

Introduction

This Japanese Industrial Standard has been prepared based on the first edition of **ISO 527-5** published in 1997 with some modifications of the technical contents.

The portions underlined with dots are the matters in which the contents of the corresponding International Standard have been modified. A list of modifications with explanations is given in Annex JA.

1 Scope

1.1 This Standard specifies the test conditions for the determination of the tensile properties of unidirectional fibre-reinforced plastic composites, based upon the general principles given in **JIS K 7161**.

1.2 The test method is for obtaining tensile strength, modulus of elasticity in tension and tensile stress-strain characteristics under the fixed condition from the tensile behaviour using test specimens.

1.3 The test method is suitable for all polymer matrix systems reinforced with unidirectional fibres.

The method is suitable for composites with either thermoplastic or thermosetting matrices, including preimpregnated materials (prepregs). The reinforcements covered include carbon fibres, glass fibres, aramid fibres and other similar fibres. The reinforcement geometries of unidirectional fibres covered include rovings and unidirectional fabrics and tapes.

The method is not normally suitable for multidirectional materials composed of several unidirectional layers at different angles (see **JIS K 7164**).

1.4 The method is performed using one of two different types of test specimen, depending on the direction of the applied stress relative to the fibre direction (see clause **6**).

1.5 In this test method, the standard dimension of the test specimen is specified, because test results obtained using test specimens having different dimensions or the test specimens prepared under the different conditions can not be compared with each other. Other factors, for example, such as test speed or conditioning of the test specimen also have effects on the result. Therefore, when the comparable data is requested, these factors shall be carefully controlled and recorded.

NOTE : The International Standard corresponding to this Standard and the symbol of degree of correspondence are as follows.

ISO 527-5 : 1997 *Plastics—Determination of tensile properties—Part 5: Test conditions for unidirectional fibre-reinforced plastic composites* (MOD)