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**Automotive parts — Disk brake pads
— Test procedure of thermal expansion**

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Descriptors : road vehicles, vehicle components, disc brakes, brake pads, brake discs, thermal expansion, thermal testing

Reference number : JIS D 4416 : 1998 (E)

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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of International Trade and Industry through deliberations at Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law. Consequently **JIS D 4416 : 1996** is replaced with **JIS D 4416 : 1998**.

In this revision, the relevant provisions of ISO Standard are described in the text, intending conformance with International Standard, and the provisions of the former Standard are described in the Annex.

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Divisional Council on Aircraft and Automobiles

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Automotive parts—Disk brake pads — Test procedure of thermal expansion

Introduction This Japanese Industrial Standard has been prepared on the basis of the first edition of **ISO 6313** *Road vehicles—Brake linings—Effects of heat on dimensions and form of disc pads—Test procedure* published in 1980 without any modification in technical contents, and specifies the conventional test procedure specified in the former Japanese Industrial Standard as the Annex (normative).

This Standard specifies a method for measuring dimensional changes of disc brake pads under the influence of heat. At the same time, it gives an indication of the resistance of whole disc brake pads to heat transfer in the direction of applied pressures.

An extension of this Standard for drum brake linings is still to be prepared.

1 Scope This Standard specifies a combined method of measuring disc brake pads (hereafter, referred to as “pads”) to determine their dimensional changes in relation to temperature and their resistance to heat transfer.

The dimensions concerned are:

- thickness dimension ;
- certain dimensions of the lining outline when their variation may involve a malfunctioning of the brake.

This Standard applies to pads for road vehicles. Their dimensions should not exceed 80 mm in depth, 120 mm in width and 20 mm in thickness, being of integral moulded or bonded type, and the backing plate of solid type.

Remarks : The International Standard corresponding to this Standard is listed as follows.

ISO 6313:1980 *Road vehicles—Brake linings—Effects of heat on dimensions and form of disc brake pads—Test procedure*

2 Normative reference The following standard contains provisions which, through reference in this Standard, constitute provisions of this Standard. The most recent edition of the standard indicated below shall be applied.

ISO 611 *Road vehicles—Brake of automotive vehicles and their trailers—Vocabulary*

3 Symbols and designations For general definitions, see **ISO 611**.

Symbol	Designation
d_m	Mean thickness of specimen pad (see 4)
d_{A_i}	Dimensions, possibly concerned, of the lining outline (see 4)
d_{B_i}	Dimensions, possibly concerned, of the lining outline at room temperature after test (see 6)
Δd_i	Changes of the possibly concerned dimensions of the lining outline (see 7)