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Design recommendations for bevel gears

Recommandations pour le dimensionnement d'engrenages coniques

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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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Foreword

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In exceptional circumstances, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide by a simple majority vote of its participating members to publish a Technical Report. A Technical Report is entirely informative in nature and does not have to be reviewed until the data it provides are considered to be no longer valid or useful.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO/TR 22849 was prepared by Technical Committee ISO/TC 60, *Gears*, Subcommittee SC 2, *Gear capacity calculation*.

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Design recommendations for bevel gears

1 Scope

This Technical Report provides information for the application of bevel and hypoid gears using the geometry in ISO 23509, the capacity as determined by ISO 10300 (all parts) and the tolerances in ISO 17485.

This Technical Report provides additional information on the application, manufacturing, strength and efficiency of bevel gears for consideration in the design stage of a new bevel gear set.

The term “bevel gear” is used to mean straight, spiral, zerol bevel and hypoid gear designs. Where this Technical Report pertains to one or more, but not all, the specific forms are identified.

The manufacturing process of forming the desired tooth form is not intended to imply any specific process, but rather to be general in nature and applicable to all methods of manufacture.

This Technical Report is intended for use by an experienced gear designer capable of selecting reasonable values for the required data based on his/her knowledge and background. It is not intended for use by the engineering public at large.

2 Symbols, descriptions and units

The symbols and descriptions used in this Technical Report are, wherever possible, consistent with other International Standards on bevel gears. As a result of certain limitations, some symbols and descriptions are different than in similar literature pertaining to spur and helical gearing.

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