



JAPANESE  
INDUSTRIAL  
STANDARD

Translated and Published by  
Japanese Standards Association

---

JIS B 0174 : 2007

(JSCTA/JSA)

## **Gear cutters — Vocabulary**

---

ICS 01.040.25;25.100.99

Reference number : JIS B 0174 : 2007 (E)

PROTECTED BY COPYRIGHT

B 0174 : 2007

Date of Establishment: 1978-04-01

Date of Revision: 2007-10-20

Date of Public Notice in Official Gazette: 2007-10-22

Investigated by: Japanese Industrial Standards Committee  
Standards Board

Technical Committee on Machine Elements

---

JIS B 0174 : 2007, First English edition published in 2008-06

Translated and published by: Japanese Standards Association  
4-1-24, Akasaka, Minato-ku, Tokyo, 107-8440 JAPAN

---

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

© JSA 2008

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

NH/HN

Printed in Japan

PROTECTED BY COPYRIGHT

## Contents

	Page
1 Scope .....	1
2 Normative references .....	1
3 Classification .....	1
4 Designation of gear cutter .....	1
5 Terms and definitions .....	2
5.1 Names of gear cutters .....	3
5.2 Types of gear cutters .....	4
5.3 Elements of gear cutters .....	27
5.4 Angles of gear cutters .....	63
5.5 Accuracies of gear cutters .....	69
5.6 Damage of cutting tooth of gear cutter .....	78
5.7 Gear cutters in general .....	81
Annex A (informative) Bibliography .....	87
Alphabetical index .....	88

## Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by The Japan Small Cutting Tools' Association (JSCTA)/ Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS B 0174** : 1991 is replaced with this Standard.

This **JIS** document is protected by the Copyright Law.

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.

## **Gear cutters — Vocabulary**

### **1 Scope**

This Japanese Industrial Standard specifies the designations of gear cutters <sup>1)</sup> generally used mainly for metal cutting and the related terms and definitions thereof.

Note <sup>1)</sup> The tools for cutting the tooth spaces of gears or similar parts (e.g. spline shaft, sprocket, etc.).

### **2 Normative references**

The following standard contains provisions which, through reference in this text, constitute provisions of this Standard. The most recent edition of the standard (including amendments) indicated below shall be applied.

JIS B 0102 *Vocabulary of gear terms — Definitions related to geometry*

### **3 Classification**

The classification of terms shall be in accordance with the following :

- a) **Names of gear cutters**
- b) **Types of gear cutters**
  - 1) Classification according to cutting tooth materials and surface treatments
  - 2) Classification according to structures
  - 3) Classification according to attaching methods
  - 4) Classification according to functions or uses
- c) **Elements of gear cutters**
- d) **Angles of gear cutters**
- e) **Accuracies of gear cutters**
  - 1) Gear hobs
  - 2) Pinion type cutters
  - 3) Rotary gear shaving cutters
  - 4) Others
- f) **Damages on cutting tooth of gear cutter**
- g) **Gear cutters in general**

### **4 Designation of gear cutter**

The gear cutter shall generally be designated by combining the appropriate terms in the order given in **b)** of clause **3**.