

中·英·法·德·日·俄  
特种加工术语词典

A TERMINOLOGICAL DICTIONARY  
OF NON-TRADITIONAL MACHINING  
IN  
CHINESE-ENGLISH-FRENCH-GERMAN-JAPANESE-RUSSIAN

王至亮 趙振斌 主編

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## 内 容 简 介

本词典收集了特种加工,其中包括放电加工、电化学加工、激光加工、超声加工、电子束加工、化学加工、等离子加工和离子加工以及其他特种加工共计 995 个词条。每个词条的术语均按中、英、法、德、日、俄六语种编写;定义或解释用中、英文编写。六语种术语总计 8230 个(连拼音术语 10561 个)。此外有些词条还有缩略语、符号、公式和图表。因此,本书不仅是一本较好的多语种多向专业词典,而且还是一部具有实用价值的特种加工小百科全书。

本词典优先采用国际统一术语、中外国家标准术语和学会统一术语,因此,它具有较强的国际通用性和技术权威性。

本词典适用于与特种加工有关的机械设计与制造、电源与控制、加工工艺与机电一体化等方面的科技人员、中高级工人和管理干部以及机电院校的师生查阅。对外贸和翻译人员也有参考价值。

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## SYNOPSIS OF CONTENT

995 entries of non-traditional machining, involving electro-discharge, electro-chemical, laser beam, ultrasonic, electron beam, chemical, plasma and ion machining as well as other non-traditional machining, are collected in this dictionary. In every entry, terminology is written in Chinese, English, French, German, Japanese and Russian; and definition or explanation is written in Chinese and English. There are altogether 8230 terms (10561 alphabetic writing included) in six languages. In addition, some entries have abbreviations, symbols, formulas and figures attached to them. Consequently, this book is not only a good multilingual and multi-way professional dictionary, but also a concise encyclopaedia of non-traditional machining with the most practical use.

This dictionary is given priority to the employment of internationally unified, national standard and institutionally unified terms of China and foreign countries. Therefore, it possesses the characteristics common use and technical authority in the world.

This dictionary is suitable for scientific and technical personnel, middle and high rank workers, and managerial cadres, who work in the field of mechanical design and manufacturing, generator and control, machining technology and mechatronics relative to non-traditional machining as well as teachers and students of mechano-electrical colleges. It is also a good reference book for foreign trade personnel and translators.

中国机械工业部部长 何光远 题词

促进国际交流  
发展特种加工

何光远  
一九八五年  
六月廿二日

# HE GUANG-YUAN'S INSCRIPTION

Minister

Ministry of Machinery Industry of China

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To promote the international exchange and  
to develop the non-traditional machining.

22th June 1995, Beijing  
He Guang-Yuan



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## 序

特种加工是一门比较新颖的技术,近年来发展较快。为了适应国内外科学技术的发展、交流、普及和教学等工作的需要,特种加工名词术语的确切定名和定义以及不同语种技术术语的准确对照就显得十分必要了。

自 1966 年以来,各国特种加工学术组织和专家们在本国特种加工术语和定义方面做了大量工作,有的还制定了国家标准;国际生产工程研究学会(C.I.R.P.)也编辑了国际统一术语并被国际电加工学术会议(ISEM)所采用。尽管如此,但仍然不能满足特种加工技术发展和国际技术交流的需要。客观上迫切需要一部多语种术语对照并有定义或解释的特种加工术语词典。

为了适应这种需要,北京机械工程学会电加工分会和科学技术文献出版社合作组织编辑出版了《中·英·法·德·日·俄特种加工术语词典》。

本词典在加工方法、术语的范围和数量以及语种和内容等方面均超过了目前已知的国内外同类词典。它不仅是一本较好的多语种多向特种加工术语词典,同时也是一部具有实

用价值的特种加工小百科全书。

本词典优先采用国际统一术语、中外国家标准术语和学会统一术语。因此,它具有较强的国际通用性和技术权威性。

本词典的编辑出版工作是一项极其繁重和细致的工作。编者为此进行了长期、大量和艰苦的工作。我代表中国机械工程学会(CMES)向参加本词典编译、审校、录排和出版工作的专家们以及帮助和支持此项工作的中外专家们表示衷心的感谢。我深信《中·英·法·德·日·俄特种加工术语词典》的出版无疑是对国内外特种加工界的一大贡献。为此对编者致以热烈地祝贺,并祝本词典出版发行取得成功。

最后,希望今后加强国际合作,进一步修正补充和完善这一部词典。

中国机械工程学会秘书长 程瑞全

一九九五年五月

## PREFACE

Non-traditional machining is a new technology. It has been developed quickly in recent years. In order to adapt to the needs of scientific and technical development, exchange, popularity and teaching at home and abroad, it is extremely necessary to give names and define the terminology of non-traditional machining, and it is also necessary to contrast the technical terminology in different languages exactly.

Since 1966, academic organizations and experts of non-traditional machining in different countries have done a lot of work in the aspect of terminology and definition in their own countries, some of them have already drawn up national standards. International Institution for Production Engineering Research (C. I. R. P.) has compiled internationally unified terminology and they have been adopted by International Symposium for Electro-Machining (ISEM'). However, it still can't meet the needs of technical development and internationally technical exchange of non-traditional machining. Thus a terminological dictionary of non-traditional machining which has the function of multilingual contrasting and has definitions or explanations is in urgent need.

For this reason, Electrical Machining Institution of BMES cooperates with Scientific and Technical Documents Publishing House in editing and publishing «A TERMINOLOGICAL DICTIONARY OF NON-TRADITIONAL MACHINING IN CHINESE-ENGLISH-FRENCH-GERMAN-JAPANESE-RUSSIAN»

This dictionary exceeds all the same kinds of dictionary-

ies which we have known at home and abroad currently in the aspects of processes, range and quantity of terms, kinds of language and content. It is not only a good multilingual and multi-way non-traditional machining dictionary, but also a concise encyclopaedia of non-traditional machining with the most practical use.

This dictionary is given priority to the employment of internationally unified, national standard and institutionally unified terms of China and foreign countries. Therefore, it possesses the characteristics of common use and technical authority in the world.

To edit and publish such a dictionary is so strenuous and meticulous that the compilers have spent a great deal of effort. I representing Chinese Mechanical Engineering Society (CMES) pay tribute to all the experts for their translatable and editorial, proofreading and examinational, typewriting and typesetting, as well as publishing work on this dictionary, and I also sincerely thank the experts from China and abroad for their help and support. I believe that the publishing of «A TERMINOLOGICAL DICTIONARY OF NON-TRADITIONAL MACHINING IN CHINESE-ENGLISH-FRENCH-GERMAN-JAPANESE-RUSSIAN » is undoubtedly a great contribution to the field of non-traditional machining at home and abroad. Congratulate the editors, and congratulate the dictionary to publish successfully.

Finally, I hope that the international cooperation can be strengthened in the future, so the dictionary can be amended, replenished, and completed further.

May 1995

Cheng R. Q.

General Secretary, CMES

## 前 言

为了适应我国特种加工技术发展的需要,逐步统一国内特种加工术语,有利于贯彻国际统一术语和吸收别国特种加工术语以及促进国内外技术交流,我们在多年术语调查、收集和整理的基础上,于 1993~1995 年编辑了这部《中·英·法·德·日·俄特种加工术语词典》。

本词典收集了特种加工(NTM)其中包括放电加工(EDM)、电化学加工(ECM)、激光加工(LBM)、超声加工(USM)、电子束加工(EBM)、化学加工(ChM)、等离子加工(PM)、离子加工(IM)和其他特种加工(ONTM)的 995 个词条、8230(包括拼音术语共计 10561)条术语、350 个缩略语、173 个符号、47 个公式和 125 个图表(详见附录的统计表)。本词典是按分类词汇编排的,为了查阅方便,还给出了六语种术语的字母顺序索引、缩略语索引和符号索引等。

本词典的电子束加工和化学加工由王先逵编译,激光加工由周昌炽编译,词典的前言和说明部分由王至尧编写,其余

部分均由王至尧、楚振斌编译。词典的审校分技术审校和文字审校。在技术审校方面,特种加工和放电加工由胡传锦审校,电化学加工由田继安和吴志刚审校,激光加工,电子束加工和化学加工由楚振斌审校,超声加工由范国良审校,等离子加工、离子加工和其他特种加工由林世昌审校;在文字审校方面,中文由蒋驰、英文由申坤和余炎、法文由李祥文和俞运佳、德文由罗运清和康天翼、日文由王克锡、俄文由沙都亚(В. Л. Шадуя)和余炎审校。最后,全书由王至尧、楚振斌统编和统校。并由王至尧定稿。

本词典在编辑出版过程中,得到了中外电加工界的同事和专家们,特别是С. J. 霍伊韦耳曼(荷兰)、久保田護(日本)、В. Л. 沙都亚(白俄罗斯)、В. И. 格利申(俄国)、余承业、于家珊、李庆隆、程允惠和彭力等专家的支持和帮助,特此表示感谢。

由于编者的水平所限,又缺乏经验,词典中难免有疏漏和不妥之处,衷心希望广大中外读者提出宝贵意见。

编 者

一九九五年五月

## INTRODUCTION

In order to adapt to the needs of the technical development of non-traditional machining in our country, unify the domestic terminology of non-traditional machining step by step, benefit to implement the internationally unified terminology, absorb the non-traditional machining terminology from other countries and promote technical exchange domestic and abroad, on the basis of many years' investigating, collecting and systematizing terms, we edited 《A TERMINOLOGICAL DICTIONARY OF NON-TRADITIONAL MACHINING IN CHINESE-ENGLISH-FRENCH-GERMAN-JAPANESE-RUSSIAN》 in 1993—1995.

995 entries, 8230 terms (altogether 10561 in which alphabetic writing is included), 350 abbreviations, 173 symbols, 47 formulas and 125 figures (for details, see the statistical tables in appendix) are collected in this dictionary. It consists of many processes of non-traditional machining (NTM), such as electro-discharge machining (EDM), electro-chemical machining (ECM), laser beam machining (LBM), ultrasonic machining (USM), electron beam machining (EBM), chemical machining (ChM), plasma machining (PM), ion machining (IM) and other non-traditional machining (ONTM). This dictionary is edited according to the classified glossary, and it is also given alphabetical index of six language terms, index of abbreviations and symbols etc. for the convenience of looking up.

EBM and ChM of this dictionary are translated and edited



by Wang X. K. ; LBM by Zhou C. C. ; introduction and directions are written by Wang Z. Y. ; and all the rest by Wang Z. Y and Chu Z. B. . Proofreading and examining of the dictionary are divided into technical and literary ones. In the aspect of technique, NTM and EDM are proofreaded and examined by Hu C. J. ; ECM by Tian J. A. and Wu Z. G. ; LBM, EBM and ChM by Chu Z. B. ; USM by Fan G. L. ; PM, IM and ONTM by Lin S. C. . In the literary aspect, Chinese is proofreaded and examined by Jiang C. ; English by Shen K. and Yu Y. ; French by Li X. W. and Yu Y. J. ; German by Luo Y. Q. and Kang T. Y. ; Japanese by Wang K. X. and Russian by Шадуя В. Л. and Yu Y. . At last, all of the dictionary are edited and proofreaded integrally by Wang Z. Y and Chu Z. B. and confirmed by Wang Z. Y. .

During the compilation and publication of this dictionary, it has enjoyed the support and help from colleagues and experts of electro-machining circles in China and abroad. Especially, it has got much help from C. J. Heuvelman (Netherlander), M. Kubota (Japanese), В. Л. Шадуя (Belarussian) В. И. Гришин (Russian), Yu C. Y. , Yu J. S. , Li Q. L. , Cheng Y. H. , Peng L. and others. Here we give them whole-hearted thanks.

Because the editors have their limitations and lack of experiences, omissions, errors and occasional misprints in the dictionary are hard to be avoided, we earnestly request valuable suggestion from readers of domestic and abroad.

May 1995, Beijing  
Editors