

<<制造工程与技术>>

图书基本信息

书名：<<制造工程与技术>>

13位ISBN编号：9787111363064

10位ISBN编号：711136306X

出版时间：2012-1

出版时间：机械工业出版社

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页数：382

字数：613000

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内容概要

机械工业出版社本影印改编教材《制造工程与技术》取自原版英文教材《Manufacturing Engineering and

Technology》(PRENTICE HALL 2010, 第6版, ISBN

97879817067814479)中的部分篇章。

针对国内教学课程设置, 将原书内容改编为机加工和热加工两册, 并分别出版, 方便学校选用。

为保持书籍内容体系, 方便读者查找和了解原书全貌, 特别在两册中保留完整的改编目录。

内容涵盖金属铸造工艺与设备、压力成形工艺与设备、连接工艺与设备、粉末冶金工艺与设备、非金属材料加工和快速原型工艺与设备。

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章节摘录

版权页：插图：Rolling. In powder rolling (also called roll compaction) , the metal powder is fed into the roll gap in a two-high rolling mill (Fig. 8.18) and is compacted into a continuous strip at speeds of up to 0.5 m/s. The rolling process can be carried out at room or elevated temperatures. Sheet metal for electrical and electronic components and for coins can be made by this process. Extrusion. Powders can be compacted by extrusion, whereby the powder is enclosed in a metal container and hot extruded. After sintering, preformed PM parts may be reheated and forged in a closed die to their final shape. Superalloy powders, for example, are hot extruded for enhanced properties. Pressureless Compaction. In pressureless compaction, the die is gravity filled with metal powder and the powder is sintered directly in the die. Because of the resulting low density, pressureless compaction is used principally for porous metal parts, such as filters.

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