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Nota di contenuto	Cover; Contents; Introduction; 1. Introduction; 2. Powder Metallurgy Processes and Materials; 2.1. Metal powder production; 2.6.3 Heat treatment and surface hardening; 2.2. Chemical, physical and technological characteristics of metal powders; 2.3. Mixing and compaction; 2.4. Sintering; 2.5. Alloying methods and alloying elements; 2.6. Secondary operations; 2.7. Porosity and mechanical properties of sintered iron and steel; 3. PRINCIPLES OF MACHINING OF STEEL; 3.1. Machining process; 3.2. Characterisation of machining processes; 3.3. Analysis of the machining process 3.4. Machinability testing4. CUTTING TOOLS; 4.1. Cutting tool materials; 4.2. Tool coatings and hardening processes; 4.3. Cutting tool wear and tool life; 4.4. Cutting tools, workpiece material and surface integrity; 5. FACTORS INFLUENCING THE MACHINABILITY OF PM STEELS; 5.1. Effect of processing characteristics on machinability; 5.2. Effect of materials characteristics on machinability; 6. MEASURES TO IMPROVE MACHINABILITY OF PM STEELS; 6.1.Machining aids in powder metallurgy; 6.2. Production processes; 6.3. Effect of machining operations; 7. MACHINING OF SINTERED STEELS - STATE OF ART

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	 7.1. Plain iron and iron-carbon steels7.2. Iron-copper-carbon steel; 7.3. Nickel alloys steels; 7.4. Diffusion alloyed steels; 7.5. Chromium, manganese, chromium-manganese and solicon alloyed steels; 7.6. Iron-phosphorus steel; 7.7. Stainless steel; Comparing machinability of various steels under different cutting conditions; 7.9. Standardizing machinability of PM steels; 7.10. Special processing and machining routes for high strength - hardness PM steels; 7.11. Machining of powder forged steels; 8. RECOMMENDATIONS FOR MACHINING PM STEELS; 8.1.Recommendations for drilling 8.2. Recommendations for turning8.3. Tapping and threading; 8.4. Recommendations and cutting data for milling, reaming, broaching and green machining; 8.5. Recommendations for machining of PM steels; 9. APPENDIX; 9.1. Relationship between hardness values determined by Vickers and Rockwell methods; 9.2. Chemical composition and designation of PM steels; 9.3. Trade designation and base characteristics; 9.4. Characteristic types of wear of hard metal inserts; References; Index
Sommario/riassunto	The aim of the book is to present knowledge for an overview of all interacting factors in the machining process, including those for improving machinability. They include the properties of basic plain iron and alloyed powders, various additions, compacting and sintering conditions. The effect of porosity, individual alloying elements and microstructure character is considered.