1. Record Nr. UNINA9910450185203321 Autore Salak Andrei Titolo Machinability of powder metallurgy steels [[electronic resource] /] / A. Salak, M. Selecka and H. Danninger Cambridge,: Cambridge International Science Publishing, 2005 Pubbl/distr/stampa **ISBN** 1-280-23149-1 9786610231492 1-4237-2289-2 1-904602-44-4 Descrizione fisica 1 online resource (551 p.) Altri autori (Persone) SeleckaM (Marcela) DanningerH (Herbert) Disciplina 671.37 Soggetti Powder metallurgy Metallurgy Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Includes bibliographical references and index. Nota di bibliografia Cover; Contents; Introduction; 1. Introduction; 2. Powder Metallurgy Nota di contenuto 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.

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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.

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