Record Nr. UNINA9910877479103321 **Titolo** Wood machining / / edited by J. Paulo Davim London, : ISTE Pubbl/distr/stampa Hoboken, N.J., : Wiley, 2011 **ISBN** 1-118-60267-6 1-118-60271-4 1-118-60230-7 1-299-18773-0 Descrizione fisica 1 online resource (289 p.) Collana ISTE Altri autori (Persone) DavimJ. Paulo Disciplina 674 Millwork (Woodwork) Soggetti Woodworking machinery Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Cover: Wood Machining: Title Page: Copyright Page: Table of Contents: Preface; Chapter 1. Machining of Wood and Wood Composites; 1.1. Introduction: 1.2. Wood and wood-based composites: 1.3. Approach to cutting; 1.4. Main techniques of machining; 1.5. Problems of machining wood and wood composites - a review; 1.6. Into the future - further scenarios of wood and wood composites machining: 1.7. Acknowledgement; 1.8. Bibliography; Chapter 2. Wood and Woodbased Panel Machining Quality; 2.1. Solid wood machining; 2.1.1. Background; 2.1.2. Cutting forces; 2.1.3. Chip formation 2.1.4. Case study - monitoring the cutting operation 2.2. Wood-based panels machining; 2.2.1. State of the art; 2.2.2. Processes for woodbased panels machining; 2.2.3. Case study; 2.3. Surface quality; 2.3.1. Objective surface characterization; 2.3.2. Subjective surface characterization; 2.4. Case study: solid wood machining and surface quality evaluation; 2.5. Case study: particleboard machining and edge quality evaluation; 2.6. Bibliography; Chapter 3. Reducing Tool Wear by Cryogenic Treatment and Cooling with Refrigerated Air when Processing Medium Density Fiberboard; 3.1. Introduction

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## Sommario/riassunto

Wood as an engineering material can be technically defined "as a hygroscopic, orthotropic, biological, and permeable material having extreme chemical diversity and physical complexity with structures, that vary extensively in their shape, size, properties and function". Therefore, using wood to its best advantage and most efficiency in engineering applications, specific characteristics or chemical, physical and mechanical properties must be considered. The products are divided into two classes, solid wood and composite wood products. Solid wood includes shipbuilding, bridges, flooring, mine