Record Nr. UNINA9910818759303321 Autore Boothroyd G (Geoffrey), <1932-> Titolo Product design for manufacture and assembly / / Geoffrey Boothroyd, Peter Dewhurst, Winston A. Knight Boca Raton, Fla., : CRC P., 2011 Pubbl/distr/stampa **ISBN** 9781420089288 (e-book) 9781420089271 (hbk.) 0-429-14296-X 1-4200-8928-5 Edizione [3rd ed.] Descrizione fisica 1 online resource (xxxviii, 670 p.) : ill Manufacturing engineering and materials processing;; 74 Collana Altri autori (Persone) DewhurstPeter KnightW. A <1941-> (Winston Anthony) Disciplina 658.5752 Soggetti Industrial design Concurrent engineering Production planning Product design Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto 1. Introduction -- 2. Selection of materials and processes -- 3. Product design for manual assembly -- 4. Electrical connections and wire harness assembly -- 5. Design for high-speed automatic assembly and robot assembly -- 6. Printed circuit board design for manufacture and assembly -- 7. Design for machining -- 8. Design for injection molding -- 9. Design for sheet metalworking -- 10. Design for die casting --11. Design for powder metal processing -- 12. Design for sand casting -- 13. Design for investment casting -- 14. Design for hot forging --Index. Sommario/riassunto Hailed as a groundbreaking and important textbook upon its initial publication, the latest iteration of Product Design for Manufacture and Assembly does not rest on those laurels. In addition to the expected updating of data in all chapters, this third edition has been revised to provide a top-notch textbook for university-level courses in product design and manufacturing design. The authors have added a

comprehensive set of problems and student assignments to each

chapter, making the new edition substantially more useful. See what's in the third edition: Updated case studies on the application of DFMA techniques; Extended versions of the classification schemes of the features of products that influence the difficulty of handling and insertion for manual, high-speed automatic, and robot assembly; Discussions of changes in the industry such as increased emphasis on the use of surface mount devices; New data on basic manufacturing processes; Coverage of powder injection molding. Recognized as international experts on the re-engineering of electro-mechanical products, the methods and guidelines developed by Boothroyd, Dewhurst, and Knight have been documented to provide significant savings in the product development process. Often attributed with creating a revolution in product design, the authors have been working in product design manufacture and assembly for more than 25 years. Based on theory yet highly practical, their text defines the factors that influence the ease of assembly and manufacture of products for a wide range of the basic processes used in industry. It demonstrates how to develop competitive products that are simpler in configuration and easier to manufacture with reduced overall costs.