Record Nr. UNINA9910458377203321 Autore Hosford William F. Titolo Metal forming: mechanics and metallurgy / / William F. Hosford, Robert M. Caddell [[electronic resource]] Cambridge: ,: Cambridge University Press, , 2007 Pubbl/distr/stampa **ISBN** 1-107-18484-3 0-511-81111-X 0-511-64933-9 0-511-35395-2 0-511-57416-9 0-511-35453-3 Edizione [Third edition.] Descrizione fisica 1 online resource (xiii, 312 pages) : digital, PDF file(s) Disciplina 671.3 Soggetti Metal-work **Deformations (Mechanics)** Metals - Plastic properties Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Title from publisher's bibliographic system (viewed on 05 Oct 2015). Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Cover; Half-title; Title; Copyright; Contents; Preface to Third Edition; 1 Stress and Strain; 2 Plasticity; 3 Strain Hardening; 4 Instability; 5 Temperature and Strain-Rate Dependence: 6 Work Balance: 7 Slab Analysis and Friction; 8 Upper-Bound Analysis; 9 Slip-Line Field Analysis; 10 Deformation-Zone Geometry; 11 Formability; 12 Bending; 13 Plastic Anisotropy; 14 Cupping, Redrawing, and Ironing; 15 Forming Limit Diagrams; 16 Stamping; 17 Other Sheet-Forming Operations; 18 Formability Tests; 19 Sheet Metal Properties; Index Sommario/riassunto This book helps the engineer understand the principles of metal forming and analyze forming problems - both the mechanics of forming processes and how the properties of metals interact with the processes. The first third of the book is devoted to fundamentals of mechanics and materials; the middle to the analyses of bulk forming processes like drawing, extrusion, and rolling; and the last third covers sheet forming processes. In this new third edition, an entire chapter

has been devoted to forming limit diagrams, and various aspects of

stamping, including the use of tailor welded blanks, and another on other sheet forming operations, including hydroforming of tubes. Coverage of sheet metal properties has been expanded to include new materials and more on aluminium alloys. Interesting end-of-chapter notes have been added throughout as well as references. More than 200 end-of-chapter problems are also included.