



Deformation and Drawability of Nimonic Superalloy C-263

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Condition: New. Publisher/Verlag: LAP Lambert Academic Publishing | Effects of Microstructure, Texture, Sheet Thickness and Aging Condition | THIS STUDY correlates textural and microstructural features of Nimonic C-263 (A nickel-base superalloy) to the in-plane anisotropy in tensile properties, nature of deformation and work hardening behaviour as well as drawability (Limit Drawing Ratio and Forming Limit Diagrams, based on computer modelling using commercial LS-DYNA software) as a function of sheet thickness and aging condition. The book outlines the procedures for the evaluation of MICROSTRUCTURE (Optical, Scanning and Transmission Electron Microscopy), TEXTURE (XRD, Pole Figures and ODFs), MICROHARDNESS-based yield loci, TENSILE DEFORMATION behavior (In-plane Anisotropy in Strengths, Ductility and Work Hardening as well as Deformation Mechanisms), FRACTOGRAPHY and the means of applying these properties to estimate DEEP DRAWABILITY for the construction of honeycomb like structures for HYPERSONIC and RE-ENTRY vehicles. The limit strains of FLDs obtained by the computer simulation are verified by the analytical equations developed using VERTEX THEORY. Essentially, this is an empirical study of relevance to material research, alloy design and industrial processing technologies. | Format: Paperback | Language/Sprache: english | 192 pp.



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