



## The Effect of Hydrogen and Hydrides on the Integrity of Zirconium Alloy Components: Delayed Hydride Cracking (Paperback)

By Manfred P. Puls

Springer London Ltd, United Kingdom, 2014. Paperback. Book Condition: New. 2012 ed.. 235 x 155 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*.By drawing together the current theoretical and experimental understanding of the phenomena of delayed hydride cracking (DHC) in zirconium alloys, *The Effect of Hydrogen and Hydrides on the Integrity of Zirconium Alloy Components: Delayed Hydride Cracking* provides a detailed explanation focusing on the properties of hydrogen and hydrides in these alloys. Whilst the emphasis lies on zirconium alloys, the combination of both the empirical and mechanistic approaches creates a solid understanding that can also be applied to other hydride forming metals. This up-to-date reference focuses on documented research surrounding DHC, including current methodologies for design and assessment of the results of periodic in-service inspections of pressure tubes in nuclear reactors. Emphasis is placed on showing how our understanding of DHC is supported by progress in general understanding of such broad fields as the study of hysteresis associated with first order phase transformations, phase relationships in coherent crystalline metallic solids, the physics of point and line defects, diffusion of substitutional and interstitial atoms in crystalline solids, and continuum fracture and solid mechanics. Furthermore, an account...



### Reviews

*This publication is definitely worth purchasing. Yes, it is actually engage in, nevertheless an amazing and interesting literature. You can expect to like just how the author write this publication.*

-- **Odie Dicki**

*An incredibly great ebook with lucid and perfect explanations. It is actually rally fascinating throug studying period of time. It is extremely difficult to leave it before concluding, once you begin to read the book.*

-- **Josefina Yundt**