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Nota di contenuto	Chapter 1: Creep Life of P91 steel -- Chapter 2: Microstructural details of as-received P91 (9Cr-1Mo) steel -- Chapter 3: Micrographs of creep interrupted P91 : T1°C temperature & s1 stress -- Chapter 4: Micrographs of creep interrupted P91 : T2°C temperature & s2 stress -- Chapter 5: Micrographs of creep interrupted P91 : T3°C temperature & s3 stress -- Chapter 6: Precipitate size of creep exposed P91: T1°C temperature & s1 stress -- Chapter 7: Vickers hardness of creep exposed P91 : T1°C temperature & s1 stress -- Chapter 8: Magnetic NDE parameters of creep exposed P91 : T1°C temperature & s1 stress -- Chapter 9: NLU parameters of creep exposed P91 : T1°C temperature & s1 stress -- Chapter 10: Ultrasonic parameters of creep exposed P91 : T1°C temperature & s1 stress supplements.

Sommario/riassunto

This book highlights the qualitative and quantitative sequential changes in microstructure of P91 steel under various stress and temperature conditions. The P91 alloy is an established material used under elevated temperature and stress in the components of thermal power plants. Temperature and stress levels for laboratory experimentation have been selected based on the true operating condition of a boiler. This book describes both full length as well as interrupted tests that were performed under given parameters. Subsequently, the microstructures, bulk hardness and NDE parameters (magnetic and non-linear ultrasonic) have been evaluated. For reliable data, the microstructures have been observed at different regions of creep exposed samples by different characterization techniques. This has been further followed by drawing co-relation between specific features like precipitate size variation with creep strain / creep time and so on. Given the contents, this book will be a useful reference for researchers and professionals working in the area of materials especially in thermal power plants.
