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Soggetti	Motor vehicles - Design and construction Materials - Analysis Mechanics, Applied Solids Automotive Engineering Materials Characterization Technique Solid Mechanics
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Nota di contenuto	Principles of Spring Design -- Stress Distributions over Cross-Section of Wires -- Equivalent Columns for Helical Springs -- Disk Springs -- Thin-Walled Rods with Semi-Opened Profiles -- Coiling Process for Helical Springs -- Presetting and residual stresses in helical springs -- Shot peening of Springs -- Fatigue of Spring Materials -- Stress Ratio, Environmental and Temperature Effects on Fatigue of Spring Materials -- Creep and Relaxation of Springs -- Failure Probability of Helical Spring.
Sommario/riassunto	This book highlights the mechanics of the elastic elements made of steel alloys with focus on the metal springs for automotive industry. The industry and scientific organizations study intensively the foundations of design of spring elements and permanently improve the mechanical properties of spring materials. The development responsibilities of spring manufacturing company involve the optimal application of the existing material types. Thus, the task entails in the target-oriented evaluation of the mechanical properties and the subsequent design of the springs, which makes full use of the

attainable material characteristics. The book stands as a valuable reference for professionals in practice as well as an advanced learning resource for students of structural and automotive engineering.

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