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Titolo	Lightweight Design : An Introduction Based on One-Dimensional Structures // by Andreas Öchsner
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Nota di contenuto	Introduction and Motivation -- Basics of Mechanics of Materials -- Lightweight Design Concepts: Material Selection -- Lightweight Design Concepts: Shape Optimization -- Sandwich Structures: Basic Mechanical Load Cases -- Sandwich Structures: Limit Load -- Sandwich Structures: Optimization -- Further Lightweight Design Concepts and Calculation Methods -- Short Solutions to the Calculations Problems -- Appendix.
Sommario/riassunto	This textbook presents the various lightweight design concepts using simple one-dimensional structures in a very understandable way and provides an easy introduction to the subject. It provides comprehensible information and advice on material selection and the geometric design of components. Students are also supported by a large number of exercises and their detailed solutions. It is the translation of the current third German edition. Contents Basics of Mechanics of Materials Lightweight Design Concepts: Material Selection

Lightweight Design Concepts: Shape Optimization Sandwich Structures:
Basic Mechanical Load Cases Sandwich Structures: Limit Load Sandwich
Structures: Optimization Further Lightweight Design Concepts and
Calculation Methods Target group Mechanical engineering students
specializing in design engineering and mechatronics The author Prof.
Dr.-Ing. Andreas Öchsner, D.Sc., represents the field of structural
simulation and lightweight design at Esslingen University of Applied
Sciences in teaching and research.
