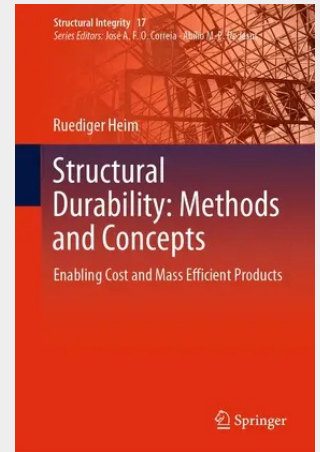


Structural Durability: Methods and Concepts

Enabling Cost and Mass Efficient Products

This book provides methods and concepts which enable engineers to design mass and cost efficient products. Therefore, the book introduces background and motivation related to sustainability and lightweight design by looking into those aspects from a durability and quality point of view. Hence this book gives a "top-down" approach: What does an engineer has to do for providing a mass and cost efficient solution? A central part of that approach is the "stress-strength interference model" and how to deal with "stresses" (caused by operational loads) as well as with the "strength" of components (provided by material, design and manufacturing process). The basic concepts of material fatigue are introduced, but the focus of the volume is to develop an understanding of the content and sequence of engineering tasks to be performed which help to build reliable products. This book is therefore aimed specifically at students of mechanical engineering and mechatronics and at engineers in professional practice.

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