



José Antonio Pero-Sanz Elorz, Daniel Fernández González, Luis Felipe Verdeja

Structural Materials

Properties and Selection

- Specially conceived for graduate and undergraduate courses and for beginners in materials science
- Complemented with 117 exercises, problems and case-studies
- Presents the main structural materials and their utilization in different engineering applications

The book covers the most important materials (naturals, metals, ceramics, polymers and composites) to be used mainly as structural engineering materials. Their main applications based on the properties are described in the first chapters of the book: mechanical, physical and chemical. The second part of the book is dedicated to the conceptual design by properties for a certain structural application: stiffness, mechanical strength, toughness, fatigue resistance, creep, etc., taking into account the weight and the cost. One of the chapters of the second part of the book is focused on the heat treatments of steels in order to improve their resistance to fatigue. The book concludes with a critical comparison between materials considering their production, properties and cost, and the forecast about the utilization of the different fields of materials in structural applications.

1st ed. 2019, XII, 372 p. 181 illus., 32 illus. in color.

Printed book

Hardcover

89,99 € | £79.99 | \$109.99

^[1]96,29 € (D) | 98,99 € (A) | CHF 106,50

eBook

74,89 € | £63.99 | \$84.99

^[2]74,89 € (D) | 74,89 € (A) | CHF 85,00

Available from your library or springer.com/shop

MyCopy ^[3]

Printed eBook for just

€ | \$ 24.99

springer.com/mycopy

Order online at springer.com / or for the Americas call (toll free) 1-800-SPRINGER / or email us at: customerservice@springernature.com. / For outside the Americas call +49 (0) 6221-345-4301 / or email us at: customerservice@springernature.com.

The first € price and the £ and \$ price are net prices, subject to local VAT. Prices indicated with [1] include VAT for books; the €(D) includes 7% for Germany, the €(A) includes 10% for Austria. Prices indicated with [2] include VAT for electronic products; 19% for Germany, 20% for Austria. All prices exclusive of carriage charges. Prices and other details are subject to change without notice. All errors and omissions excepted. [3] No discount for MyCopy.

