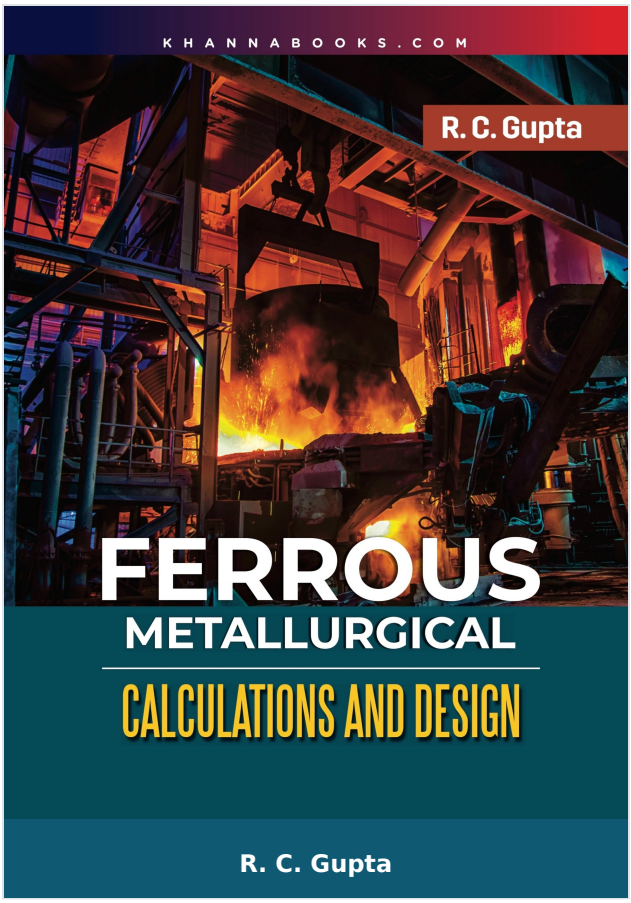

Ferrous Metallurgical (Calculations and Design)

Author :	R. C. Gupta
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Product Description

This book is a unique combination of ferrous metallurgical calculations and unit design. The book is divided in two arts each having eight chapters.

The part one on ferrous metallurgical calculations gives method to calculate mass balance, chemical analysis of the product and waste materials including exit gases. This part one covers Coal & It’s Properties, Combustion of Fuels, Coke Making, Iron Ore Agglomeration, Blast Furnace Iron Making, Alternate Methods of Iron Making, Ferroalloy Preparation and Melting Metal & Alloys.

The second part on Ferrous Metallurgical Unit Design may be a globally first attempt to provide method of estimating basic design dimensions of some metallurgical units. This part covers Chimney & Draught, Coke Oven, Blast Furnace, DRI Kiln, Ladle Cupola, Basic Oxygen Steel Making Furnace, and Electric arc Furnace.

In addition, the appendices provide weight, Measure & Science Laws, Mathematical Formulae, Unit Conversion Tables, Useful Data, Commonly Used Materials, Raw, Materials for Iron & Steel Making, Fuels and their Properties and Steel Plant Waste materials.

Keys features

1. A useful book for Academic Staff & Students in Metallurgical Engineering, Still Plant Executives, Metallurgical Consultants, Steel Plant Managers, Chartered Engineers, and Auditors.

2. A Metallurgical Engineering book giving calculation method for mass balance, product & waste analysis in various ferrous metallurgical processes.

3. A first book to give method for designing metallurgical units e.g. coke oven, blast furnace, DRI Kiln, BOF, EAF, Ladle, Cupola etc.

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4. Each chapter starts with introduction to highlight importance before giving calculation or design & each chapter gives projects for students. Some reference for further reading is also given at the end of chapters.

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