Ferroalloys (Ferro Manganese, Ferro Molybdenum, Ferro Niobium, Ferro Boron, Ferro Titanium, Ferro Tungsten, Ferro Silicon, Ferro Nickel, Ferro Chrome)

Description:

An alloy is a mixture or solid solution composed of metals.Similarly, Ferroalloys are the mixture of Iron with high proportion of otherelements like manganese, aluminium or silicon. Alloying improves the physicalproperties like density, reactivity, Young's modulus, electrical and thermalconductivity etc. Ferroalloys thus show different properties as mixture ofdifferent metals in different proportion exhibit a wide range of properties.Also, Alloying is done to alter the mechanical properties of the base metal, toinduce hardness, toughness, ductility etc.

The main demand of ferroalloys, nowadays is continuously increasingas the major use of such products are in the field of civil construction;decorative items; automobile; steel industry; electronic appliances. The bookprovides a wide idea to readers about the usage of appropriate raw material andthe treatment involved in the processing of raw material to final produce,safety, uses and properties of raw material involved in the processes.

This book concisely presents the core principles and varied detailsinvolved in processing of ferroalloys. The work includes detailed coverage ofthe major products like ferroaluminium, ferrosilicon, ferronickel,ferromolybdenum, ferrotungsten, ferrovanadium, ferromanganese and lesser knownminor ferroalloys.

Progress in thermodynamics and physico-chemical factors inferroalloy production has developed rapidly during the past twenty-five yearsor so. The book presents the principles and current knowledge of processes inthe production of various ferroalloys.

The production of a particular ferroalloy involves a number ofprocesses to be followed in order to give the alloy desired physical andmechanical properties. The slight difference in the temperature or heating orcomposition can lead to entirely different alloy with different properties.This book is not only confined to the different processes followed in theproduction of ferroalloys but also describes the processes used and otherinformation related to product, which are necessary for the manufacturer'sknowledge. Also, the book gives the reader appropriate knowledge regarding theselection the best of available raw materials.

Keywords: complete, book, ferroalloys, ferro, manganese, molybdenum, niobium, boron, titanium, tungsten, silicon, nickel, chrome, zirconium, production, ferrous, sulphide, secondary, raw, materials, techniques, pollution, control, ferroalloy

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