

Ferrous and Non-Ferrous Metals Production with Casting and Forging (Aluminium Alloys, Copper Alloys, Magnesium Alloys, Welding and Joining Processes, ARC Welding Processes, Electrode coating, Spot Welding, Allied Processes, Electron Beam Welding, Structur

Description:

In metallurgy, a non-ferrous metal is a metal, including alloys, that does not contain iron (ferrite) in appreciable amounts. Generally more expensive than ferrous metals, non-ferrous metals are used because of desirable properties such as low weight (e.g. aluminium), higher conductivity (e.g. copper), non-magnetic property or resistance to corrosion (e.g. zinc). Some non-ferrous materials are also used in the iron and steel industries.

Ferrous (Fe^{2+}), in chemistry, indicates a divalent iron compound (+2 oxidation state), as opposed to ferric, which indicates a trivalent iron compound (+3 oxidation state). This usage has mostly been deprecated, with current IUPAC nomenclature having names containing the oxidation state in bracketed Roman numerals instead, such as iron (II) oxide for ferrous oxide (FeO), and iron (III) oxide for ferric oxide (Fe_2O_3).

The Casting process has traversed a long path and impacted human civilization for nearly five millennia. For any metal casting process, selection of right alloy, size, shape, thickness, tolerance, texture, and weight is very vital. . Casting process involves melting the metal to be used, pouring it into a mould, letting it cool and then knocking out the casting.

Forging technology occupies a very important place among all the manufacturing processes as it produces parts with excellent properties and with minimal wastage. Forging involves the use of machinery with a hammering or pressing action to convert basic shapes into a pre-determined form. Forging has the capacity to refine the grain structure and improve the physical properties of the metal.

This handbook gives a concise description of the fascinating on the state-of-the-art technology of the casting and forging process of metals and metal alloys. This book contains precise details on production of ferrous and non-ferrous metals, its casting and forging process along with their alloys.

For more details download PDF file.

Keywords: How to Start Ferrous and Non-Ferrous Metal Processing Industry, Most Profitable Copper Production Business Ideas, Pig Iron Processing Projects, Small Scale Aluminium Manufacturing Projects, Starting a Non-Ferrous Metal Processing Business, How to Start a Ferrous and Non-Ferrous Metal Production Business, Ferrous Metals Based Small Scale Industries Projects, New small scale ideas in special welding processing industry, NPCS, Niir, Process technology books, Business consultancy, Business consult

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