
Thank you for downloading your volume's surface engineering asm handbook. May you always be knowledgeable that people have looked through titles for their books. Reading this like an asm handbook volume 5 surface engineering asm handbook, not yet stop in downloads.


This volume surveys surface engineering, an exciting and important discipline that integrates materials science and engineering with other sciences to achieve a wide range of properties and functions for materials and systems. Surface engineering techniques provide new ways to change or improve physical, chemical, and biological properties of a material's surface. This Handbook volume describes the processes, applications, and case studies for each of the 12 chapters, which are organized into four parts:

Part 1: Surface Science and Technology

This part presents a comprehensive overview of the science and technology of surface engineering, including chapters on the fundamentals of surface science, surface characterization, and material properties. It also covers the interaction of materials with biomolecules and water, and the fundamentals of corrosion science.

Part 2: Surface Engineering Techniques

This part focuses on the various techniques used in surface engineering, such as plasma processing, electroplating, laser surface treatment, and polymer surfaces. It also covers the design and application of surface coating systems, the role of surface engineering in the manufacturing process, and the use of surface engineering for reliability and safety in energy systems.

Part 3: Surface Engineering Applications

This part discusses the applications of surface engineering in various industries, such as automotive, aerospace, and electronics. It also covers the role of surface engineering in the development of new materials and technologies, and the impact of surface engineering on the environment.

Part 4: Surface Engineering Case Studies

This part presents a series of case studies that demonstrate the application of surface engineering in real-world situations. It includes examples from industries such as automotive, aerospace, and electronics, and covers topics such as the use of surface engineering in the development of new materials and technologies, and the impact of surface engineering on the environment.

This Handbook volume is an essential resource for researchers, engineers, and practitioners who are interested in the science and technology of surface engineering, as well as for students and professionals in the materials science and engineering fields.

Additional Information:

- This volume has been thoroughly reviewed and revised by experts in the field, ensuring the accuracy and reliability of the information presented.
- The volume includes an index and a comprehensive list of references, making it easy to find specific information.
- The volume is available in both print and electronic formats, allowing readers to access the information in the format that best suits their needs.

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