

1. Record Nr.	UNINA9910254155403321
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Titolo	Applied Metallurgy and Corrosion Control : A Handbook for the Petrochemical Industry // by Amiya Kumar Lahiri
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2017
ISBN	981-10-4684-0
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XXIII, 544 p. 260 illus.)
Collana	Indian Institute of Metals Series, , 2509-6400
Disciplina	620.11223
Soggetti	Metals Tribology Corrosion and anti-corrosives Coatings Engineering—Materials Metallic Materials Tribology, Corrosion and Coatings Materials Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Chapter 1: Introduction -- Chapter 2: Classification of Metallic Engineering Materials -- Chapter 3: Production and Working of Metals and Alloys -- Chapter 4: Structure of Metals and Alloys -- Chapter 5: Mechanical Behaviour of Metals and Alloys -- Chapter 6: Heat Treatment -- Chapter 7: Metallurgical Aspects of Welding -- Chapter 8: Material Degradation -- Chapter 9: Material Selection and Performance in Oil and Gas Industry -- Chapter 10: Material Selection and Performance in Refining Industry -- Chapter 11: Material Selection and Performance in Fertilizer Industry -- chapter 12: Damage Assessment and Repair of Stationary Equipment -- Chapter 13: Failure Analysis .
Sommario/riassunto	This book serves as a comprehensive resource on metals and materials selection for the petrochemical industrial sector. The petrochemical industry involves large scale investments, and to maintain profitability the plants are to be operated with minimum downtime and failure of equipment, which can also cause safety hazards. To achieve this objective proper selection of materials, corrosion control, and good

engineering practices must be followed in both the design and the operation of plants. Engineers and professional of different disciplines involved in these activities are required to have some basic understanding of metallurgy and corrosion. This book is written with the objective of servings as a one-stop shop for these engineering professionals. The book first covers different metallic materials and their properties, metal forming processes, welding, and corrosion and corrosion control measures. This is followed by considerations in material selection and corrosion control in three major industrial sectors, oil & gas production, oil refinery, and fertilizers. The importance of pressure vessel codes as well as inspection and maintenance repair practices have also been highlighted. The book will be useful for technicians and entry level engineers in these industrial sectors. Additionally, the book may also be used as primary or secondary reading for graduate and professional coursework. .
