

1. Record Nr.	UNISALENT0991002469919707536
Titolo	Applied physics. A : Solids and surface / American Institute of physics. - 1981-1994
Pubbl/distr/stampa	Berlin, 1981-1994
ISSN	0721-7250
Altri autori (Enti)	AIP <American Institute of Physics>
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Periodico
2. Record Nr.	UNINA9910877797803321
Autore	Patle Dipesh Shikchand
Titolo	Control and Safety Analysis of Intensified Chemical Processes
Pubbl/distr/stampa	Newark : , : John Wiley & Sons, Incorporated, , 2024 ©2024
ISBN	9783527843657 3527843655 9783527843633 3527843639
Edizione	[1st ed.]
Descrizione fisica	1 online resource (384 pages)
Altri autori (Persone)	RangaiahGade Pandu
Soggetti	Chemical engineering Chemical processes
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Cover -- Title Page -- Copyright -- Contents -- Preface -- Part I Overview and Background -- Chapter 1 Introduction -- 1.1 Process Intensification -- 1.2 Need for Control and Safety Analysis of Intensified Chemical Processes -- 1.3 Studies on Control and Safety

Analysis of Intensified Chemical Processes -- 1.4 Scope and Organization of the Book -- 1.5 Conclusions -- References -- Chapter 2 Applications and Potential of Process Intensification in Chemical Process Industries -- 2.1 Introduction -- 2.2 Benefits of Process Intensification Techniques -- 2.3 Static Mixers -- 2.4 Process Intensification for Separation Vessels -- 2.5 Process Intensification for Distillation -- 2.6 Process Intensification for Heating -- 2.6.1 Steam Injection Heater -- 2.6.2 Steam/Electric Heaters as a Replacement for Fired Heaters -- 2.6.3 Process Intensification for Flue Gas Heat Recovery -- 2.6.4 Process Heat Exchangers -- 2.6.5 Sonic Horn -- 2.7 Steam Compression -- 2.8 Process Intensification for Carbon Capture -- 2.9 Process Intensification for Vacuum Systems -- 2.10 Process Intensification for Water Deaeration -- 2.11 Process Intensification for Development of Inherently Safer Design (ISD)

Sommario/riassunto

This book, edited by Dipesh Shikchand Patle and Gade Pandu Rangaiah, explores the control and safety analysis of intensified chemical processes. It provides an in-depth examination of novel equipment and techniques aimed at enhancing productivity and sustainability in chemical engineering. The text covers topics such as simulation, optimization, dynamic control, and safety analysis, with contributions from leading researchers worldwide. The book is intended for researchers, students, and practitioners in chemical engineering, focusing on the challenges and potential of intensified processes in reducing environmental impact and improving efficiency.
