Record Nr. UNINA9910568268403321 Autore Golwalkar Kiran R. Titolo Practical Guidelines for the Chemical Industry: Operation, Processes, and Sustainability in Modern Facilities / / by Kiran R. Golwalkar, Rashmi Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2022 3-030-96581-3 ISBN Edizione [1st ed. 2022.] 1 online resource (309 pages): illustrations (some color) Descrizione fisica Disciplina 660.015118 660.2804 Chemical engineering Soggetti Chemistry, Technical Green chemistry Chemical processes Chemicals - Safety measures Chemical Engineering **Industrial Chemistry Green Chemistry Process Chemistry Chemical Safety** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto 1. Management Functions -- 2. Hazid, Hazop and Ensuring Safety -- 3. Material of Construction -- 4. Pressure Vessels -- 5. Piping Design and Pumping Systems -- 6. Cooling and Heating Systems -- 7. Cogeneration of Steam, Power, Steam Traps and Heat Exchangers -- 8. Process Control and Instrumentation -- 9. Practical Considerations and Guidelines. This book provides practical guidelines to chemical engineers, plant Sommario/riassunto managers, maintenance engineers, and senior managements in modern chemical processing facilities. It provides guidelines to the readers for

operational competencies such as hazard identification (HAZID), hazard

operability studies (HAZOP), avoiding mistakes in plant facilities to ensure safety, compliance with various statutory rules and regulations; and management of human resources through improved working conditions, provision of safety equipment etc. It further presents technical information on pressure vessels, design of piping and selection of pumping systems, materials for construction and lining of process units operating at high temperature and corrosive conditions, and criteria for selection of different methods for heating of process units. In addition to its application to existing operations, the book includes information on expansion, diversification, and modernization of facilities and guidelines for revival of old and idle plants. Finally, the authors discuss various safety issues, controlling cost of production, and sustainability topics such as planning and implementing cogeneration of steam and power, environmental pollution control for chemical plants and safe disposal of hazardous wastes.