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Titolo	Controllo delle nascite e santità della famiglia / saggi di E. R. Baltazar ... [et al.] ; presentati da Thomas D. Roberts ; introduzione all' edizione italiana di Carlo Bo
Pubbl/distr/stampa	Milano, : Rizzoli, copyr. 1965
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2. Record Nr.	UNINA9910877284603321
Autore	Britton Laurence G. <1951->
Titolo	Avoiding static ignition hazards in chemical operations / / Laurence G. Britton
Pubbl/distr/stampa	New York, : Center for Chemical Process Safety of the American Institute of Chemical Engineers, c1999
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	<p>Avoiding Static Ignition Hazards in Chemical Operations: A CCPS Concept Book; CONTENTS; Preface; Acknowledgments; 1 INTRODUCTION; 1-1. Purpose; 1-2. Exclusions; 1-3. Units; 1-4. Organization of the Book; 2 FUNDAMENTALS OF STATIC ELECTRICITY; 2-1. What Is Static Electricity?; 2-1.1. Charge Separation; 2-1.2. Magnitude of Current and Potential; 2-1.3. Concentration of Charged Species; 2-1.4. Importance of Trace Contaminants; 2-1.5. Hazard Evaluation; 2-1.6. Statistics; 2-2. Charge Generation; 2-2.1. Induction Charging; 2-2.2. Ionic Charging; 2-3. Charge Dissipation 2-3.1. Variability of Conductivity 2-4. Charge Accumulation; 2-5. Ignition; 2-5.1. Effective Energy; 2-6. Static Discharges; 2-6.1. Corona Discharge; 2-6.2. Brush Discharge; 2-6.3. Bulking Brush Discharge; 2-6.4. Spark Discharge; 2-6.5. Propagating Brush Discharge (PBD); 2-6.6. Surface Streamer; 2-7. Personnel Spark and Shock Hazards; 2-7.1. Body Capacitance and Resistance; 2-7.2. Voltage (V) and Energy (W) Attained; 2-7.3. Human Shock Response; 3 EVALUATING THE HAZARD OF STATIC ELECTRICITY; 3-1. General; 3-2. Hazard Identification Methods; 3-2.1. Decision Trees; 3-3. Charge Accumulation 3-3.1. Conductive Objects 3-3.2. Nonconductive Objects; 3-4. Energy Estimates; 3-4.1. Charge Sharing; 3-5. Instrumentation; 3-5.1. Charge; 3-5.2. Electric Field; 3-5.3. Potential; 3-5.4. Ignition Energy; 3-5.5. Conductivity of Liquids; 3-5.6. Resistivity of Solids; 3-5.7. Resistance; 3-6. Direct Observation of Discharges; 3-7. Radio Frequency Detection of Discharges; 3-8. Measuring the Effective Energy of Nonspark Discharges; 3-8.1. Gas Composition; 4 CONTROLLING ELECTROSTATIC HAZARDS; 4-1. Bonding and Grounding; 4-1.1. Definitions; 4-1.2. Purpose of Bonding and Grounding 4-1.3. Resistance to Ground 4-1.4. Bonding and Grounding Systems; 4-1.5. Ground Rods; 4-1.6. Grounding and Cathodic Protection; 4-2. Control of Charge Relaxation; 4-2.1. Increase of Conductivity; 4-2.2. Charge Neutralizers; 4-3. Control of Personnel Charging; 4-3.1. Personnel Grounding; 4-3.2. Clothing; 4-3.3. Gloves; 4-4. Control of Flammable Atmospheres; 4-4.1. Liquid Nitrogen/Liquid Air Hazards; 5 FLAMMABLE LIQUIDS, VAPORS, AND GASES; 5-1. Ignition Hazards of Liquid Vapor and Mist; 5-1.1. Flammable Liquid; 5-1.2. Flammable Limits; 5-1.3. Liquid Mist; 5-1.4. Minimum Ignition Energy (MIE) 5-1.5. Explosion Prevention Systems 5-2. Generation and Relaxation (Loss) of Charge in Liquid Systems; 5-2.1. Charge Generation; 5-2.2. Charge Density; 5-2.3. Factors Influencing Charge Generation; 5-2.4. Charge Relaxation; 5-2.5. Classification of Liquids based on Conductivity; 5-2.6. Antistatic Additives; 5-2.7. Bonding and Grounding; 5-3. Flow in Pipe, Hose, and Tubing; 5-3.1. Metallic Piping Systems; 5-3.2. Nonconductive Pipe and Linings; 5-3.3. Flexible Hoses; 5-3.4. Dip Pipes; 5-3.5. Filters and Relaxation Tanks; 5-3.6. Suspended Material; 5-3.7. Valves and Other Line Restrictions 5-4. Filling Criteria for Tank Operations</p>
Sommario/riassunto	Written by Laurence Britton, who has over 20 years' experience in the fields of static ignition and process fire and explosion hazards research, this resource addresses an area not extensively covered in process safety standards or literature: understanding and reducing potential hazards associated with static electricity. The book covers the

nature of static electricity, characteristics and effective energies of different static resources, techniques for evaluating static electricity hazards, general bonding, grounding, and other techniques used to control static or prevent ignition, gases an

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