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Nota di contenuto	Guidelines for Evaluating Process Plant Buildings for External Explosions and Fires; Contents; Preface; Acknowledgments; 1. Introduction; 1.1. Objective and Scope; 1.2. Background; 1.3. Evolution of Design and Siting Practices for Buildings in Process Plants; 1.3.1. Brief History of Building Designs; 1.3.2. Standards for Building and Equipment Siting and Separation; 1.3.3. Standards and Criteria for Building Design, and the Need for Site-Specific Evaluation; 2. Management Overview; 2.1. Explosion and Fire Phenomena; 2.2. Statement of the Problem; 2.3. Analysis Approach 3. Initial Screening and Consequence Screening 3.1. Process and Plant Documentation; 3.2. Initial Screening; 3.2.1. Initial Screening for Events of Concern through Identification of Materials and Conditions Present at the Specific Site; 3.2.2. Conduct Initial Screening through Applying Occupancy or Functional Criteria of Concern; 3.3. Consequence

Screening; 3.3.1. Consequence Screening by Comparison to Design and Spacing Criteria; 3.3.2. Consequence Screening by Modeling Site-Specific Conditions; 4. Risk Screening; 4.1. Derivation and Presentation of Risk
4.2 Interpretation and Use of Risk Measures4.2.1. Use of Individual Risk Measures; 4.2.2. Use of Aggregate Risk Measures; 4.3. Overview of Risk-Screening Approach; 4.3.1. Process Plant Buildings Explosion Exposure; 4.3.2. Building Types; 4.3.3. Estimate of Building Damage and Probability of Serious or Fatal Injury; 4.3.4. Approximate Event Frequency Determination; 4.3.5. Risk Estimates; 5. Risk Assessment; 5.1. Hazard Identification and Evaluation; 5.2. Techniques Used to Evaluate Hazards to Buildings in Process Plants; 5.3. Key Factors to Consider in Process Plant Building Risk Assessments
5.3.1. Selecting Scenarios for Study5.3.2. Explosion Consequence Evaluation; 5.3.3. Fire Consequence Evaluation; 5.3.4. Frequency Evaluation; 5.4. Qualitative Risk Assessment; 5.4.1. Qualitative Consequence Evaluation; 5.4.2. Qualitative Frequency Evaluation; 5.4.3. Qualitative Risk Evaluation; 5.5. Quantitative Risk Analysis; 5.5.1. Quantitative Consequence Evaluation; 5.5.2. Quantitative Frequency Evaluation; 5.5.3. Quantitative Risk Determination; 6. Risk Management; 6.1. Risk Management Overview; 6.1.1. Managing Risk to Process Plant Buildings; 6.1.2. Deciding When to Use QRA
6.2. Reducing Risk to Buildings in Process Plants6.2.1. Functional Risk-Reduction Measures; 6.2.2. Preventive Risk-Reduction Measures; 6.2.3. Mitigative Risk-Reduction Measures; 6.2.4. Criteria for Mitigating Risk from Blast Effects; 6.2.5. Upgrading Buildings to Increase Blast Resistance; 6.3. Choosing among Risk-Reduction Alternatives; 7. Future Developments; 7.1. Definitions and Use of Building Occupancy Criteria; 7.2. Determination of Occupant Vulnerabilities as a Function of Building Damage; 7.3. Development of Generic Frequency Data to Improve Risk-Screening Tools
7.4. Development of Company-Specific Risk Tolerance Criteria

Sommario/riassunto

Dedicated to the Memory and Spirit of Donald F. Othmer Though there are many industry practices for building design and siting, they do not always apply to all sectors of the industry, or ensure consistent levels of safety. This practical book, written by the same author as API Recommended Practice 752, provides the details to implement the recommended practice, "Management of Hazards Associated with Location of Process Plant Buildings." Its contents include safety guidelines on fire and explosion risks to process plant buildings as a result of events external to the building, which can appl
