

1. Record Nr.	UNINA9910555150203321
Titolo	Process safety in upstream oil and gas / / American Institute of Chemical Engineers
Pubbl/distr/stampa	Hoboken, New Jersey : , : John Wiley & Sons, Incorporated, , [2021] ©2021
ISBN	1-119-62014-7 1-5231-3827-0 1-119-62006-6 1-119-62005-8
Descrizione fisica	1 online resource (191 pages) : illustrations
Disciplina	622.8
Soggetti	Gas wells - Safety measures Oil fields - Safety measures Petroleum industry and trade - Safety measures Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cover -- Title Page -- Copyright -- Contents -- List of Tables -- List of Figures -- Acronyms and Abbreviations -- Glossary -- Acknowledgments -- Online Materials Accompanying this Book -- Preface -- 1 An Introduction to Process Safety for Upstream -- 1.1 Background -- 1.2 Applicability of Process Safety to Upstream -- 1.3 Intended Audience -- 1.4 Why the Reader Should be Interested -- 1.5 Scope of This Book -- 1.6 Upstream Safety Performance -- 1.6.1 Analysis of US Offshore Safety Data -- 1.6.2 International Incident Data from IOGP -- 1.6.3 Marsh 100 Largest Losses -- 1.7 Summary -- 2 The Upstream Industry -- 2.1 Upstream Industry -- 2.1.1 Life Cycle Stages -- 2.1.2 Types of Upstream Facilities -- 2.2 Exploration Phase -- 2.2.1 Onshore -- 2.2.2 Offshore -- 2.2.3 Completion -- 2.3 Engineering Design, Construction and Installation -- 2.3.1 Engineering Design -- 2.3.2 Construction and Installation of Production Facilities -- 2.4 Production Phase -- 2.5 Well Workovers and Interventions -- 2.6 Decommissioning Phase -- 2.7 Defining "Barriers" -- 2.8 Overview of

International Regulations -- 3 Overview of Risk Based Process Safety (RBPS) -- 3.1 Background -- 3.2 RBPS Summary -- 3.2.1 Pillar: Commit to Process Safety -- 3.2.2 Pillar: Understand Hazards and Risk -- 3.2.3 Pillar: Manage Risk -- 3.2.4 Pillar: Learn from Experience -- 3.3 Conclusion -- 4 Application of Process Safety to Wells -- 4.1 Background -- 4.1.1 Drilling the Well: The Well Bore -- 4.1.2 Drilling the Well: Barriers -- 4.1.3 Drilling the Well: Fluid Column -- 4.1.4 Drilling the Well: Casing -- 4.1.5 Drilling the Well: Cement -- 4.1.6 Drilling the Well: The BOP -- 4.1.7 Well Completions -- 4.1.8 Well Workovers or Interventions -- 4.1.9 Depleted Wells -- 4.2 Well Construction: Risks and Key Process Safety Measures -- 4.2.1 Overview -- 4.2.2 The Well -- 4.2.3 Shallow Gas.

4.2.4 High Pressure High Temperature (HPHT) Wells -- 4.2.5 Adjacent Wells -- 4.2.6 Completions -- 4.2.7 Workovers or Interventions -- 4.2.8 Depleted Wells -- 4.2.9 Mud Room / Shale Shakers, Well Fluid Handling and Treatment Locations -- 4.2.10 Surface Process Equipment at Well Construction Facilities -- 4.2.11 Harsh Weather -- 4.2.12 SIMOPS -- 4.3 Applying Process Safety Methods in Well Construction -- 4.3.1 Regulations and Standards -- 4.3.2 Hazard Identification and Risk Analysis -- 4.3.3 Asset Integrity and Reliability -- 4.3.4 Training and Performance Assurance -- 4.3.5 Emergency Management -- 4.3.6 Learn from Experience -- 4.3.7 Management System Audits and Safety Culture Surveys -- 5 Application of Process Safety to Onshore Production -- 5.1 Background -- 5.2 Onshore Production Facilities: Risks and Key Process Safety Measures -- 5.2.1 Leak from Production Facilities -- 5.2.2 Gathering Pipeline Leaks -- 5.2.3 Storage Tanks and Vessels -- 5.2.4 Loss of Well Control -- 5.2.5 SIMOPS -- 5.2.6 Vents and Flare -- 5.3 Applying Process Safety Methods in Onshore Production -- 5.3.1 Regulations and Standards -- 5.3.2 Hazard identification and Risk Analysis -- 5.3.3 Learning from Experience -- 5.3.4 Emergency Management -- 6 Application of Process Safety to Offshore Production -- 6.1 Background -- 6.2 Offshore Production Facilities: Risks and Key Process Safety Measures -- 6.2.1 The Well -- 6.2.2 The Production and Export Risers -- 6.2.3 Topsides Production Equipment -- 6.2.4 Oil Storage Tanks -- 6.2.5 Other Offshore Risks -- 6.3 Applying Process Safety Methods in Offshore Production -- 6.3.1 Process Safety Culture -- 6.3.2 Regulations and Standards -- 6.3.3 Hazard Identification and Risk Analysis -- 6.3.4 Asset Integrity and Reliability -- 6.3.5 Emergency Management -- 7 Application of Process Safety to Engineering Design, Construction and Installation.

7.1 Background -- 7.1.1 RBPS and Project Engineering -- 7.1.2 Project Life Cycle Terminology -- 7.2 Front End Loading -- 7.2.1 FEL-1 -- 7.2.2 FEL-2 -- 7.2.3 FEL-3 -- 7.3 Detailed Design -- 7.4 Procurement and Construction -- 7.4.1 Procurement and Quality Plan -- 7.4.2 Construction -- 7.4.3 Operational Readiness -- 7.5 Commissioning and Startup of Facilities -- 8 Process Safety: Looking Forward -- 8.1 Looking Forward -- 8.2 Research Needs -- 8.2.1 Regulatory Bodies -- 8.2.2 Research Organizations -- 8.3 Technical Advances -- 8.3.1 Process Safety -- 8.3.2 World Energy Source Transition -- 8.4 Vision for Upstream Process Safety -- References -- Index -- EULA.