PROCESS SAFETY AT A GLANCE
A Roadmap to CCPS Tools, Management Systems and Technical Resources
# Process Safety at a Glance

## CCPS Management Resource Tools

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<td><strong>Standards, Codes, Regulations and Laws</strong></td>
<td><strong>Process Performance</strong></td>
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<td><strong>View the CCPS Video “Leading the Way to a Safer World” at aiche.org/ccps/safety</strong></td>
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<td><strong>Process Safety Competency</strong></td>
<td><strong>Guidelines for Writing Effective Operating and Maintenance Procedures</strong></td>
<td><strong>Chemical Reactivity Hazards</strong></td>
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<td><strong>Workforce Involvement</strong></td>
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<td><strong>Stakeholder Outreach</strong></td>
<td><strong>Inspiring Process Safety Leadership: The Executive Role (online and DVD)</strong></td>
<td><strong>Consequence Modeling</strong></td>
<td><strong>It always makes sense to start with “Guidelines for Risk Based Process Safety”</strong></td>
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## Understand Hazards and Risks

- G/L for Facility Site and Layout
- G/L for Defining Process Safety Competency Requirements
- Introduction to Process Safety for Undergraduates and Engineers (2016)
- A Practical Ap approach to Hazard Identification
- Process Knowledge Management
- Hazard Identification for Operations and Maintenance Workers eLearning
- G/L for Chemical Process Quantitative Risk Analysis, 2nd ed.
- G/L for Chemical Transportation Safety, Security, and Risk Management, 2nd ed.
- G/L for Management of Change
- G/L for Enabling Conditions and Conditional Modifiers in Layer of Protection Analysis
- G/L for Initiating Events and Independent Protection Layers in Layer of Protection Analysis
- G/L for Recognizing Catastrophic Incident Warning Signs in the Process Industries

## Manage Risk

- Bow Ties in Risk Management: A Concept Book for Process Safety
- Dealing with Aging Process Facilities and Infrastructure
- G/L for Integrating Management Systems and Metrics to Improve Process Performance
- Conduct of Operations and Operational Discipline
- G/L for Management of Change for Process Safety
- G/L for Managing Process Safety Risks during Organizational Change
- G/L for Improving Plant Reliability through Data Collection and Analysis
- G/L for Asset Integrity Management
- G/L for Performing Effective Pre-Startup Safety Reviews
- G/L for Process Safety Documentation
- G/L for Technical Planning for On-Site Emergencies
- Revalidating Process Hazard Analysis
- G/L for Analyzing and Managing the Security Vulnerabilities of Fixed Chemical Sites
- Process Safety for Front-Line Supervisors eLearning
- G/L for Writing Effective Operating and Maintenance Procedures
- Operating Procedures
- Safe Work Practices
- Asset Integrity and Reliability
- Contractor Management
- Training and Performance Assurance
- Management of Change
- Operational Readiness
- Conduct of Operations
- Emergency Management

## Learn from Experience

- Wisdom of Chemical Process Safety: Beacon Lessons and Accident Prevention (Currently available in Japanese.)
- CCPS Process Safety Benchmarking Program
- G/L for Process Safety Metrics
- CCPS PS Metrics Guide for Leading and Lagging Indicators
- Process Safety Leading and Lagging Metrics: “You Don’t Improve What You Don’t Measure”
- Process Safety Leading Indicators Industry Survey
- G/L for Acquisition Evaluation and Post Merger Integration
- G/L for Auditing Process Safety Management Systems, 2nd ed.
- G/L for Investigating Process Safety Incidents, 3rd ed.
- More Incidents that Define Process Safety
- Process Safety Incident Database
- Tools for Making Acute Risk Decisions with Chemical Process Safety Applications
- Vision 20/20 Process Safety: The Journey Continues
- Incident Investigation
- Measurement and Metrics Auditing
- Management Review and Continuous Improvement

## CCPS Technical Resource Tools

- **Electronic Applications**
  - CCPS Glossary
  - CCPS Process Safety Incident Evaluation (PSIE) Tool
  - NOAA/CCPS Reactive Chemistry Worksheet Tool
- **Venting and Emergency Relief**
  - Deflagration and Detonation Flame Arrester
  - Emergency Relief Systems Design Using DIERS Technology
  - G/L for Pressure Relief and Effluent Handling Systems
  - Safe Design and Operation of Process Vents and Emission Control Systems
- **Chemical Reactivity Hazards**
  - Chemical Reactivity Hazard Training CD-ROM
  - Essential Practices for Managing Chemical Reactivity Hazards
  - G/L for Process Safety in Batch Reaction Systems, 2nd ed.
  - G/L for Reactivity Evaluation and Application to Process Design
  - G/L for Safe Storage and Handling of Reactive Materials
  - Reactivity Evaluation Software Tool
- **Safe Design**
  - Continuous Monitoring for Hazardous Material Releases
  - G/L for Engineering Design for Process Safety, 2nd ed.
  - G/L for Integrating PS into Engineering Projects
  - G/L for Fire Protection in Chemical, Petrochemical, and Hydrocarbon Processing Facilities
  - G/L for Safe Warehousing of Chemicals
  - G/L for Inherently Safer Chemical Processes, A Life Cycle Approach
- **Consequence Modeling**
  - G/L for Consequence Analysis of Chemical Reactions
  - G/L for Vapor Cloud Explosion, Pressure Vessel Burst, BLEVE, and Flash Fire Hazards, 2nd ed.
  - Understanding Explosions
  - Wind Flow and Vapor Cloud Dispersion at Industrial and Urban Sites
  - G/L for Determining the Probability of Ignition of a Released Flammable Mass
- **Bioprocess Safety**
  - G/L for Process Safety in Bioprocess Manufacturing Facilities
  - PSM Biodiesel eLearning
  - PSM Bioethanol eLearning
- **Dust Explosion Hazards**
  - G/L for Safe Handling of Powders and Bulk Solids
  - G/L for Combustible Dust Hazard Analysis
- **Human Factors**
  - Human Factors: Methods for Improving Performance in the Process Industries
  - G/L for Preventing Human Error in Process Safety
- **Safety Instrumented Systems**
  - G/L for Safe and Reliable Instrumented Protective Systems
  - G/L for Safe Automation of Chemical Processes, 2nd ed.
- **R&D**
  - Making EHS an Integral Part of Process Design
- **Upstream**
  - G/L for Process Safety in Upstream and Shale Operations
  - Most CCPS titles apply equally to upstream processes.
  - Please see appropriate RBPS element or technical topic.

Most CCPS books are available at wiley.com/go/ccps.

Deep Search CCPS by searching for “CCPS” and keywords on Knovel.com.

CCPS Education Tools and courses are available at aiche.org/ccps/resources/education.

Translated Materials
- Mandarin, Japanese, Portuguese, Spanish and Italian versions available at aiche.org/ccps/quicklinks.html
- Available in Spanish, Japanese and/or Portuguese
- Available in Chinese