Professional Profile

Heidi Hartmann

Senior Safety Engineer, exida
CFSE

Fields of Competence

- Refinery Process Engineering
- Instrument, Control & Automation Engineering
- Process Hazard Analysis
- Safety Integrity Level Selection
- SIS Design and Verification
- SIS Proof Test and Mitigation Procedures
- Alarm Management and Rationalization
- NFPA 85 Compliance

Experience Summary

Heidi Hartmann is a Senior Safety Engineer with exida and responsible for process safety and safety instrumented system identification, design and verification projects. Heidi has 14 years experience in the Oil & Gas and Chemical industries.

Heidi has worked as a Process Engineer, Process Control Engineer and Safety Instrumented Systems Engineer for several large oil companies, including Shell Oil, Texaco, Valero and Saudi Aramco. She has extensive experience with Petroleum Coke Gasification and Cogeneration, Power and Steam Generation, Continuous Catalyst Regeneration (CCR) Reforming, Hydrotreating, Aromatics Extraction, Sulfuric Acid Alkylation, and Polymerization. She was the SIS Site Champion for a Shell Oil Refinery where she was responsible for implementing policies and work processes to ensure its IEC 61511 compliance. She spent approximately 5 years as a Process Control Engineer designing new and maintaining existing Foxboro Control Systems for several major refinery units.

Heidi has also worked as an Instrumentation and Control Systems Engineer at the engineering headquarters of a chemical company, Invista, which was previously owned by DuPont Textiles Inc. While in this position, she was responsible for SIS identification, design, and verification on all capital projects and NFPA compliance of the company's boilers.

Heidi is a Certified Functional Safety Expert. She has her Bachelor of Science degree in Chemical Engineering from Virginia Tech and 40 continuing education credits from the Invensys Lifetime Learning Center.

Key Assignments

Co-authoring the 2nd edition of the Safety Integrity Level Selection book originally published by ISA in 2002.

Supporting the IEC 61511 certification of GE Energy's cogeneration plants.

Lead SIL Selection reviews which identified nearly 300 SIFs in a Shell Oil Refinery. Provided conceptual designs and Cause and Effect Diagrams for these SIFs. The refinery units reviewed included a Catalytic Cracking Unit, Fluid Coking Unit, Crude Unit, Continuous Catalyst Regeneration (CCR) Reformer, Sulfuric Acid Alkylation Unit, Polymerization Unit, Hydrotreating Units, and Aromatic Extraction Unit.

Lead Alarm Rationalization reviews for an Alkylation and Polymerization Unit.

Developed a Standing Instruction for the Management of Safety Instrumented Systems for a Shell Oil Refinery.

Wrote proof test and mitigation procedures for approximately 75 refinery SIFs.

Performed SIL selection and verification for SIFs on a batch nylon production and spinning process.

Ensured NFPA 85 and 40CFR60 compliance in multiple boiler upgrade projects.

Designed and commissioned the "hot cutover" of a Naphtha Hydrotreater and Aromatics Extraction Unit to a Foxboro DCS control system.