

### **Jason Logan**

#### **Principal Consultant, Kenexis**

#### **Fields of Competence**

Process Hazards Analysis (PHA)  
Hazard and Operability Study (HAZOP)  
Safety Instrumented System (SIS) Engineering  
Layer of Protection Analysis (LOPA)  
Safety Integrity Level (SIL) Selection / Verification  
Safety Requirements Specifications (SRS)  
Test Plan Development  
High Integrity Pressure Protection System (HIPPS)  
Quantitative Risk Analysis (QRA) / Fault Tree Analysis  
Project Management

#### **Experience Summary**

Mr. Logan has over twenty-two years of experience in the oil & gas, refining, chemicals, a food industries and over fifteen years of experience in the design and implementation of engineered safeguards, such as regulatory control safeguards, safety instrumented systems, and alarm systems in the process industries. Mr. Logan is a Principal Consultant of Kenexis and is responsible for engineered safeguard design basis development and verification/validation projects. Mr. Logan's career has been diverse in the petroleum and chemical industries including work in Australia, Brazil, China, Colombia, Nigeria, the United States, and Venezuela. His experience includes process/production engineering in chemicals and refining along with risk analysis and the design of safety instrumented systems.

#### **Credentials**

Professional Engineer, P.E.  
Bachelor of Science, Chemical Engineering  
Master of Business and Administration (Finance Concentration)

#### **Key Assignments**

Mr. Logan has led numerous Process Hazards Analysis (PHA) analyzing over 100,000 deviations including over 10,000 Layer Of Protection Analysis (LOPA) to determine over 10,000 Safety Integrity Levels (SIL). SIS design projects include definition of safety instrumented functions, risk analysis to determine SIL, quantitative reliability analysis to verify achievement of SIL targets, Safety Requirements Specifications (SRS) development, and in many cases, Functional Test Plan development. Clients range from upstream oil & gas, downstream refining, & petrochemicals.

#### **Affiliations**

International Society of Automation (ISA)  
American Institute of Chemical Engineers (AIChE)

#### **Unit type experience**

- Oil and Gas Production Onshore / Offshore
- Onshore Gas Plants
- Gas Well - Pressure Protection
- Liquefied Natural Gas (LNG)
- Natural Gas Liquids (NGL)
- Crude / Crude Vac
- Delayed Coking
- Amine Treating / Sulfur Recovery (SRU)
- Hydrogen Purification
- Hydrotreating / Hydrocracking
- Utility Boilers
- Large Compressor Systems
- Ethylene Cracking
- Polyethylene
- Polypropylene
- Specialty Chemicals
- Various Food Industries

Mr. Logan has specified SIS Design and testing for over 10,000 SIFs.

Facilitated numerous Process Hazard Analysis (PHA) studies required under OSHA PSM. Techniques included HAZOP and What-If/Checklist. Processes ranged from large refining operations, NGL processing, olefin processing, amine treating, sulfur recovery, and tail gas units to small specialty chemical operations and purification operations.

- Hydrocracking
- Fluidized Catalytic Cracking (FCC)
- Flare System Overloading / Overpressure Protection Systems
- Delayed Coking
- Sulfur Recovery (SRU)
- Cumene Hydroperoxide / Phenol / Acetone
- Steam-Methane Reforming / Hydrogen
- Gas Oil / Naphtha / and Diesel Hydrotreating
- Naphtha Reforming
- Utility Boilers (Gas, Oil, Pulverized Coal)
- Onshore/Offshore oil and gas production
- Gas Liquefaction and Gas-to-Liquids
- Ammonia Production
- Compressor Systems