

Larry D. Richardson
Principal Engineer, Kenexis

Fields of Competence

Safety Instrumented System Engineering
High Integrity Pressure Protection System Design
Alarm Rationalization and Management
Process Hazards Analysis / Hazard Identification
Quantitative Risk Analysis
Chemical Engineering
Process Safety Management
Project Management

Experience Summary

Mr. Richardson has over thirty years of experience in the design and implementation of engineered safeguards, such as safety instrumented systems and alarm systems in the process industries. Mr. Richardson is a Principal Engineer of Kenexis and is responsible for engineered safeguard design basis development and verification/validation projects. In his current position he has solid experience in SIS implementation and risk analysis projects for a variety of process plants in diverse world-wide locations. Mr. Richardson's career has been primarily with UOP, a licensor of process units to the petroleum and petrochemical industries. While there he performed field verification of control and safety instrumented systems at customer sites, designed and managed development of custom control and SIS projects and was a technical resource within UOP for the safety review, design, construction and programming of control and SIS projects. Mr. Richardson was also a Technical Services engineer for petrochemicals supporting UOP's customers and provided training at customer sites. Mr. Richardson earned several patents during his time at UOP in the areas of process and process control. Mr. Richardson has participated on ISA standards committees, including SP 84 for safety instrumented systems. He also peer reviews papers for ISA Technical Conferences and ISA Transactions.

Credentials

B.S., Chemical Engineering, Auburn University, 1975

Affiliations

Instrumentation, Systems and Automation Society (ISA)
Senior Member,
Prior VP of Chicago Section
Member of SP-84 Committee

Prior member of Triconex User Group Steering Team

Key Assignments

During his career at UOP, Mr. Richardson initially participated in startups of new units. Subsequently he participated in new unit designs which included determination of control schemes and safety instrumented systems. He also participated in HAZOPs both internal for UOP and with customers. Mr. Richardson was instrumental in creating a team that does safety instrumented system (SIS) design in accordance with ISA S-84 at UOP. Mr. Richardson was considered a key resource for automation and SIS projects within UOP, called upon by various engineering groups to design control and SIS systems. In addition, Mr. Richardson worked in a group that implemented control and SIS systems. His involvement was to be a resource to several other engineers to provide specifications and guidance, to manage projects, to do all other activities related to building control and SIS systems (procurement, construction details, programming, etc.) and to perform validation and factory acceptance tests. Mr. Richardson was also expert in several petrochemical processes and provided continuing support to UOP customers with these processes. Mr. Richardson also provided training to UOP's customers in both process and control.

Mr. Richardson is now using these skills to Perform and manage safety instrumented system (SIS) design basis development and verification / validation projects at various customer sites. SIS design basis projects include identification and definition of safety instrumented functions, risk analysis to determine safety integrity level, quantitative reliability analysis to verifying achievement of SIL targets, Safety Requirements Specifications development, and in some cases, functional test plan development and PSAT assistance.

Unit type experience

- Crude
- Hydrocrackers
- Hydrogen Purification Units
- Hydrotreating
- Reforming (with continuous catalyst regeneration)
- Isomerization
- Dehydrogenation
- Selective Hydrogenation,
- Fluidized Catalytic Cracking (FCC)
- Polypropylene Production
- Cumene Production
- Phenol / Acetone Production
- Olefin Cracking
- Utility Boilers
- Compressor Systems
- And others.