



MURTAZA I. GANDHI, P.E.
Senior II Engineer
BAKER ENGINEERING AND RISK CONSULTANTS, INC.

Education:

M.S. in Electrical and Computer Engineering, Rutgers University, New Jersey
B.E. in Instrumentation and Control Engineering, Gujarat University, India

Areas of Practice:

Murtaza Gandhi works at BakerRisk's Houston office in the Process Safety Group. He is an Electrical Controls Engineer with 14 years of experience in controls and safety systems, and 7+ years' experience in qualitative hazard analysis. He has extensive experience with various phases of the safety life cycle including SIL assignment, SIL calculation, SIL facilitation and verification, FAT, SAT, and startups. He has successfully managed numerous projects, meeting schedules, and budget constraints, along with providing quality product to the client. He has facilitated multiple PHAs and LOPA studies for clients worldwide. He has been a continuous member and leader of ISA at the student, local, and national level since 2001.

Experience:

- Trained in all aspects of the Safety Life Cycle with specific trainings on facilitation and SIL verification
- Safety instrumented system (SIS) design basis development and verification / validation projects on multiple projects:
 - Implementing the requirements of the ISA 84.01 specification and IEC 61508/61511 specifications
 - Facilitated SIL Assignment meetings and HAZOP and LOPA studies for various BakerRisk clients including refineries, chemical plants, and onshore and offshore facilities. Familiar with numerous processes including Ammonia, Nitric Acid, Urea Ammonium Nitrate, Urea Formaldehyde, and gas processing plants
 - Performing complex SIL Verification calculations and FMEA on various systems and sub-systems
 - Developing Safety Requirements Specifications (SRS) and functional test plans
 - Performed Process Safety Management (PSM) audits
 - Performed reliability studies on complex scenarios using fault tree analysis
- Led startups from Factory acceptance testing to Site Acceptance Testing, PSSR and commissioning.
- Extensive knowledge of Intrinsic Safety, Electrical Area Classification, NEC and SP84 codes.
- Designed and managed the control systems and instrumentation at the BakerRisk testing facility for dispersion and jet fire tests.
- Works closely with clients to develop project concepts, performing and supervising project efforts to provide timely client deliverables.
- Supervises teams of 7 engineers.
- Performs fire and gas detector layout to optimize detectors for a specific scenario coverage.
 - Performed research on the scenario coverage using gas dispersion testing and have given multiple presentations related to this topic
 - Developed auto-optimization mechanism to have optimal coverage with minimum possible detectors (part of BakerRisk's F&Gtool© software team)
- Trained in performing Cyber Security Risk Analysis using IEC62443 standard.
- Leading many different research and software development initiatives within BakerRisk in the areas of process safety

Professional Chronology:

QDS Systems, (Control Systems Engineer), 2004-2006; Jacobs Engineering (Control Systems Engineer), 2006-2010; Kim Automation, (Sr. Project Engineer), 2010-2011; BakerRisk (Project Engineer- 2011-2014, Senior I Engineer, 2014- Present), Senior II Engineer (2016- Present)

Professional Registrations/Certifications:

Registered Professional Engineer (Texas), Certified Functional Safety Expert (CFSE)

Professional Memberships:

International Society of Automation ISA (Serves as scholarship chair for PMCD division) Sessions chair for Process Measurement and Safety Symposium, reviewed papers for IIS and ISA conferences, working member of ISA84 WG8 on Wireless in Safety.