SIL SOLVER COURSE

Time: 8:30am to 3:30pm
Audience: New and Experienced SIL Solver users

Overview

The SIL Solver course is a one-day jump-start designed to energize new users in efficient use of SIL Solver to perform verification of the safety integrity level of safety instrumented functions. Experienced users will also benefit from awareness of new software capabilities and the structured review of examples. The morning lectures provide an overview of software use, discuss software constraints and assumptions, and explain how to use advanced features that make the calculations more efficient. Key topics are as follows:

1. Identifying the required SIF functionality
2. Variables affecting SIL
   a. Fail Dangerous/Fail Safe Failure Rate
   b. Voting
   c. Testing Interval
   d. Mean Time to Repair
   e. Diagnostic Coverage & Diagnostic Interval
   f. Common Cause Factor
3. Data sheets and Selection
4. Basic and Advanced SIL Solver features

In the afternoon session attendees will receive a series of cases which they are required to execute. The cases allow the attendee to practice what was discussed during the morning lectures using examples from real-world applications. The course instructor will review each case with the attendees and explain how the cases should be modeled and what the results mean from a design and maintenance standpoint.

Objective

The course participants will gain an understanding of the following:

o How to define of a safety instrumented function.
o How SIL Solver executes the calculation.
o How to navigate in SIL Solver.
o Where the SIL Solver data comes from.
o How to build your own data sheets.
o How to backup your data sheets.
o How basic and complex safety instrumented functions are modeled using SIL Solver.

o How changes to the safety instrumented function design, operation, and maintenance affect the target SIL, reliability, and maintainability.
o How to efficiently update SIL calculations with SIL Solver.
o Report printing.

These objectives are achieved through workshop examples of SIL verification using SIL Solver Software. Since this is a hands-on course, participants must bring a laptop computer with an authorized version of SIL Solver installed.