

Safety Integrity Level (SIL) Determination Using LOPA and Other Methods to Comply with IEC 61511 and ISA 84

SIL determination is a vital step in the lifecycle for safety instrumented systems. This course provides guidelines for conducting assessments.

The international and US standards for Safety Instrumented Systems (SISs), IEC 61511 and ISA 84, require that Safety Integrity Levels (SILs) be determined for Safety Instrumented Functions (SIFs) to meet tolerable risk criteria. The standards identify several methods that can be used for this purpose including Layers of Protection Analysis (LOPA), risk graphs, and risk matrices. This course explains how these methods can be used. A detailed procedure is provided for using LOPA for SIL determination. Course attendees participate in workshops to practice SIL determination.



Objective:

Be able to determine required SILs for SIFs using LOPA, risk graphs and risk matrices.

Target Audience:

Facility personnel who are involved in implementing standards for safety instrumented systems.

Course Topics:

- Requirements of SIS standards
- Concept of hazardous events for SIFs
- Meaning and development of risk criteria
- Use of risk matrices
- Use of risk graphs
- Use of LOPA

Duration:

One day, 0.7 CEUs awarded