Training - Design and Operation of a Safety Instrumented System (SIS)

SIS-EN-P | Face-to-face only | 2 days

Understand how a risk can be reduced by an instrumented safety barrier

Level
Skilled

Public
Engineers and technical staff involved in design of SIS

Objectives
Attendees will be able to implement the following skills:

- Determine the Safety Integrity Level (SIL) of a simple system
- List the main elements of the IEC61511 standard in the context of the design of SIS to better justify its relevance of implementation

Pedagogical & technical resources

- Step by step case study
- Study of SIS on mini processes test benches

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites
No prerequisites are necessary to follow this course

Responsable
IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

SIS & SAFETY BARRIERS — 0.5 day

Different safety instrumented systems: PSS, ESD, F&G, HIPS, ESP.
Links between the different SIS - Global architecture.
Control loop: basic knowledge; elements constituting a SIS.

SIS & INDUSTRIAL RISK CONTROL — 0.5 day

Use of safety reviews (HAZOP & LOPA & HAZOP) to determine the need for a Safety Instrumented Function (SIF).
Concept of independent protective layers.

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Use of a risk matrix to determine the level of SIL required for each RIS.

SIS SPECIFICATION — 1 day

Role of functional analysis.
FIS allocation, cause and effect matrix, redundancy and common mode.
Typical design.
Simple SIL calculations. Analysis of supplier documentation.
SIL level and frequency of testing.

To French entities : IFP Training is referenced to DataDock ; you may contact your OPCO about potential funding.
Please contact our disabled persons referent to check the accessibility of this training program : referent.handicap@ifptraining.com

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