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Functional Safety in Machine and System Manufacturing (ST-FASAFN)

Short Description

The safety of machines is not only a question of human obligation but also makes economic sense. With this course, we will inform you about the legal situation, the application of relevant EU directives as well as the requirements for placing products on the market within the European Union.

Objectives

You will gain extensive knowledge of risk assessment, about the creation of safety concepts. An outlook on the CE marking rounds off the course.
Furthermore, you will receive comprehensive knowledge of the documentation of safe control according to Machinery Directive 2006/42/EC as well as about the machine validation.

Target Group

- Decision-makers
- Sales personnel
- Planners
- Programming persons
- Commissioning engineers
- Project designers
- Design engineers (in the field of mechanics, electrical, hydraulics, pneumatics)

Content

- Legal Situation
  - Overview of the European directives
  - Contents and areas of application of the Machinery Directive 2006/42/EC
  - Relevance of the harmonized European standards for the machine and system manufacturer
- Risk assessment
  - Carry out a risk assessment according to EN ISO 12100 on the basis of a sample machine
  - Conformity assessment/ declaration of conformity according to MRL 2006/42/EC for placing machines on the market (*)
  - Meaning of the CE marking
- Risk reduction
  - Risk reduction by means of the 3-step method; Implementation of the safety concept
  - Design of the architecture of the safety functions
- Applying the standards of the functional safety
  - Overview of EN ISO 13849-1
  - Overview of EN 62061
  - Practical application and independent calculation of the Performance Level (PL) as well as the Safety Integrity Level (SIL)
- Verification and Validation
  - Validation of the functional safety in the manufacturing industry according to EN ISO 13849-2 and EN 62061
  - Practical exercises demonstrate the individual steps of validation

Type

Face-to-face training

Duration

3 days

Language

en

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